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Southern Pacific's bay-window caboose cars stress **safety** and utility . . . . . p. 14

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October 2, 1961

RAILWAY AGE WEEKLY

AUTOMATIC TRAIN OPERATION

THE PROBLEMS AND THE POSSIBILITIES

p. 12

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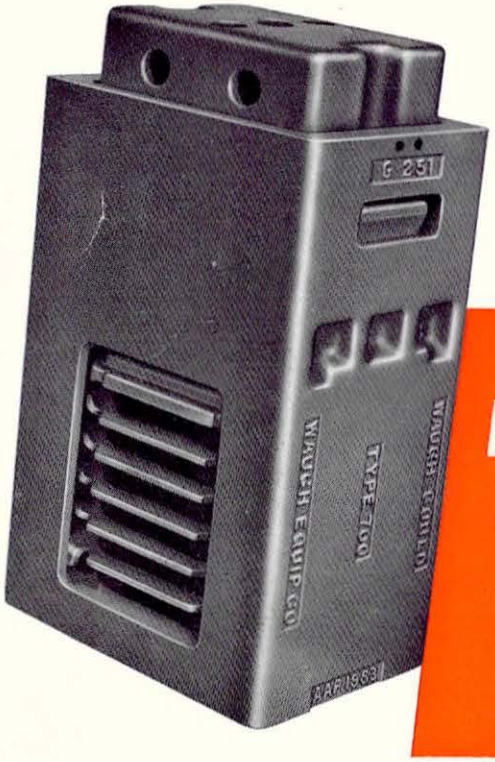

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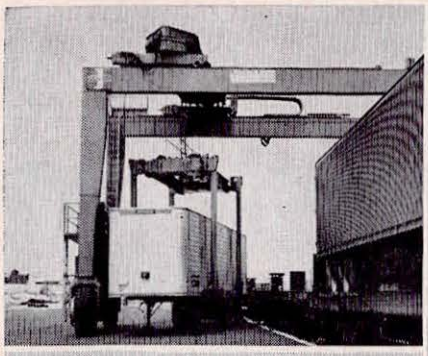

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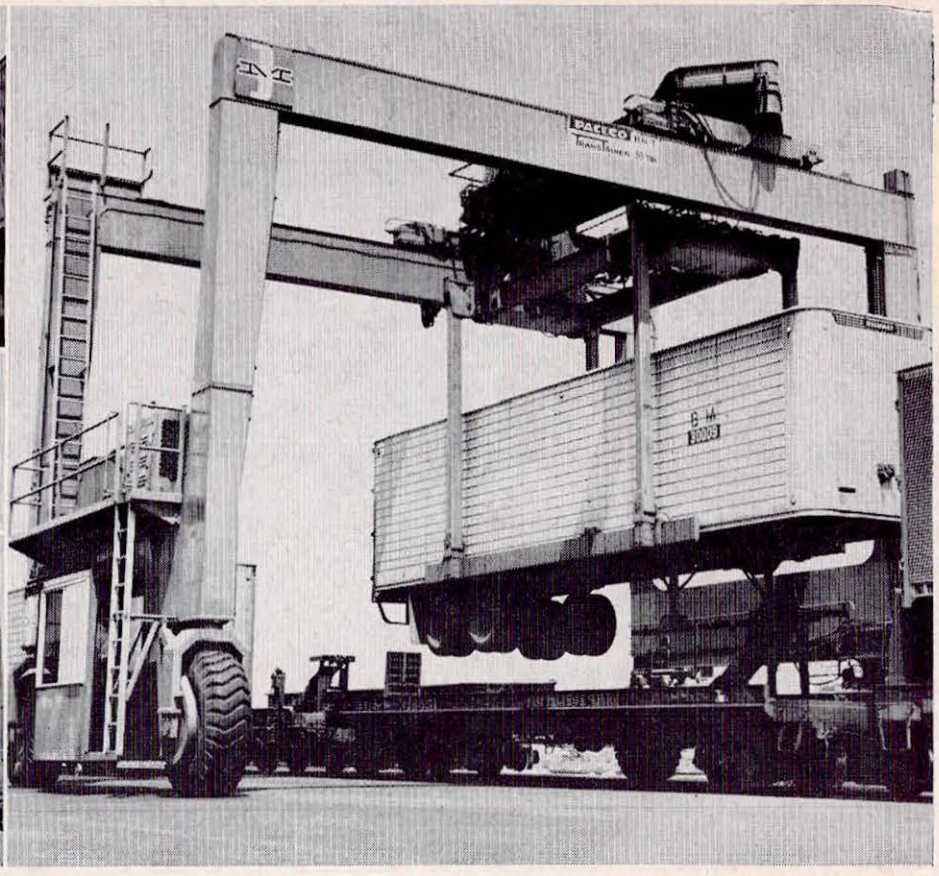

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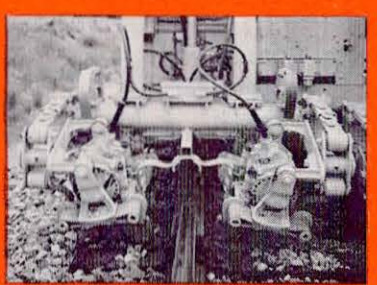
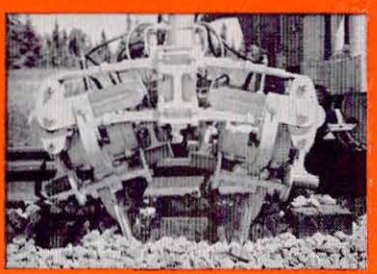


Note how the tamping bars get right under the rail and under the tie, all the way from the end to the specified distance between the rails.



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RAILWAY AGE

WEEK AT A GLANCE

Oct. 2, 1961 • Vol. 151, No. 14

NARUC workshops study rail problems

Transportation regulators from state commissions met last week in the 73rd annual convention of the National Association of Railroad and Utilities Commissioners.....**p. 9**

C&S forces use more trucks

The increased use of trucks by signal and communications departments has been helped by the nation's road building programs and the postwar boom in CTC installations.....**p.11**

Automatic train operation

Equipment is available today to run crewless trains—but there are problems. Most important are labor union attitudes, and the question of where the money will come from.....**p.12**

New SP cabooses stress safety and utility

The 200 bay-window cars, designed by the Mechanical Department in collaboration with the Operating and Safety Departments, were built by Pacific Car & Foundry **p.14**

Special train helps defense effort

The 10-car train houses electronic tracking equipment to provide a movable target site for testing the efficiency of Strategic Air Command bombing missions.....**p.19**

New products report

Here are brief descriptions of 14 new and improved devices of special interest to railroad signaling and communications engineers.....**p.24**

New L&NE will be CNJ line

The ICC last week gave the L&NE permission to abandon all but 40 miles of line, sell the rest to CNJ. In an exclusive interview, L&NE President Green tells why.....**p.26**

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WEEK AT A GLANCE

Kennedy asks sound benefits systems

In a statement accompanying signing of the bill to liberalize the railroad retirement system, President Kennedy asked Congress to improve the systems' actuarial basis p.32

The Action Page—'Full costs,' anti-RR trap

Enforcing by law the doctrine of "fully distributed costs" would destroy the jobs of railroaders, the investments of railroad owners, and railroad service p.38

Short and Significant

An increase of 3.3% in freight carloadings . . .

during the fourth quarter of 1961 compared with the same period in 1960 has been estimated by the 13 Regional Shippers Advisory Boards in reports to the AAR's Car Service Division.

Advisory Board estimates for first-quarter 1961 . . .

were high by 10.2%, according to AAR's check of the estimates against actual loadings. In the previous quarter the Board's estimates proved over-optimistic by 10.6%.

Hoffa's $5 'fine' on piggybacked trailers . . .

has been derailed in Texas, which has joined Illinois in outlawing agreements requiring motor carriers to pay charges which are not part of the direct cost of transportation.

Southern Railway will spend $7,926,000

on additional microwave, thereby doubling the length of what it says is the largest privately owned microwave system in the U.S.A. to 1,684 miles by 1962.

Anti-transport-strike law is proposed . . .

by Senator McClellan (Ark.). S. 2573 would provide anti-trust law penalties if transport of persons or property in interstate or foreign commerce were restrained "substantially."

Current Statistics

Operating Revenues	
7 mos., 1961	$5,172,751,368
7 mos., 1960	5,649,149,714
Operating expenses	
7 mos., 1961	4,202,969,598
7 mos., 1960	4,469,217,816
Taxes	
7 mos., 1961	559,167,016
7 mos., 1960	617,207,528
Net railway operating income	
7 mos., 1961	181,605,194
7 mos., 1960	354,593,181
Net income estimated	
7 mos., 1961	81,000,000
7 mos., 1960	248,000,000
Carloadings revenue freight	
37 wks., 1961	19,839,408
37 wks., 1960	22,030,094
Freight cars on order	
Sept. 1, 1961	9,690
Sept. 1, 1960	23,866
Freight cars delivered	
8 mos., 1961	22,439
8 mos., 1960	39,419

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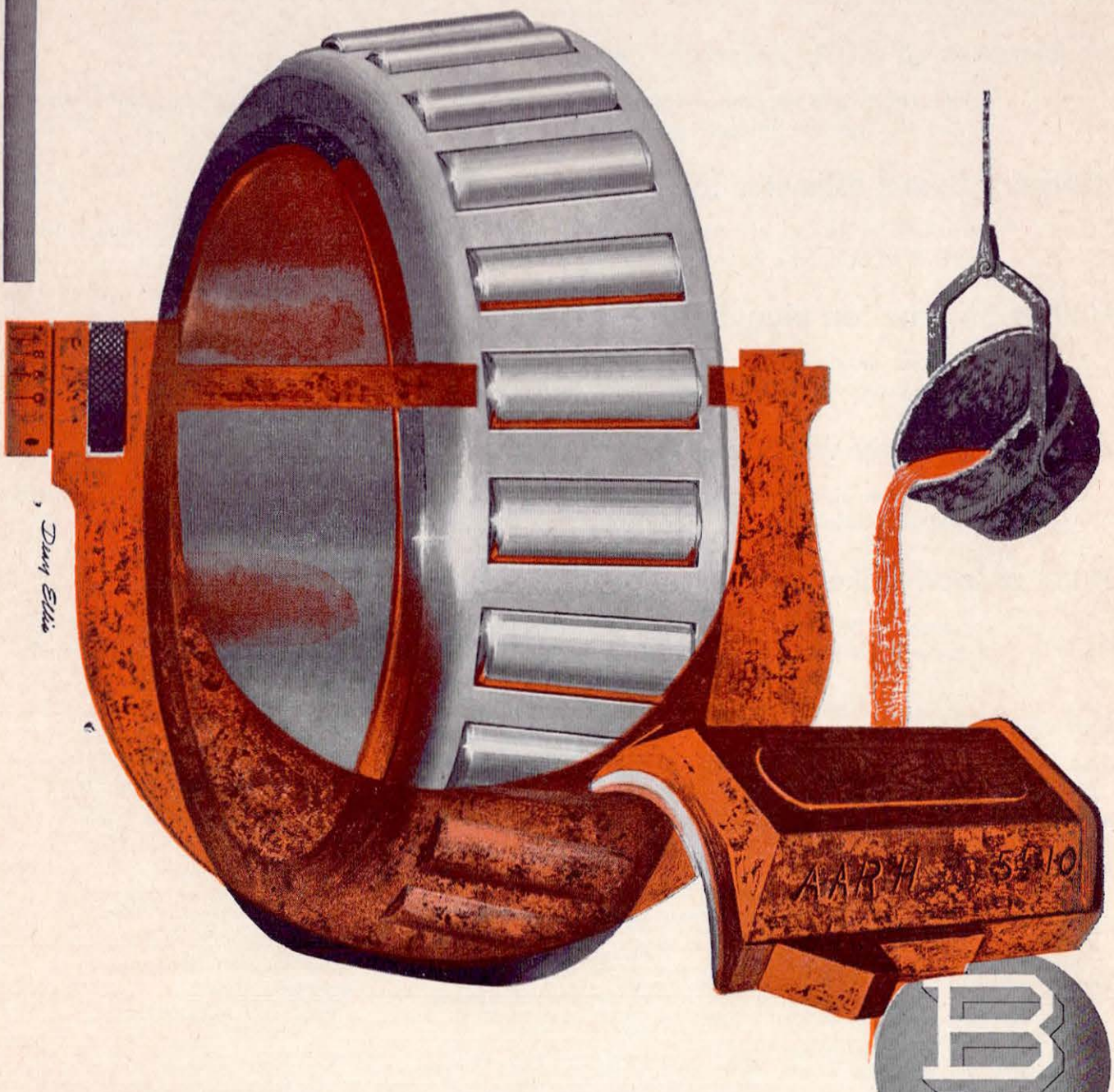

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BRENCO BEARINGS

NARUC Workshops Study Rail Problems

► **The Story at a Glance: Transportation regulators from all parts of the United States met last week in Atlantic City, N. J., at the 73rd annual convention of the National Association of Railroad and Utilities Commissioners. On the agenda—in special workshop sessions designed to promote discussion—were such topics as coordination between railroads and motor carriers, the decline in piggyback growth in 1961 (compared with earlier years), and merger.**

The common carrier transportation industry should take steps to amalgamate the Association of American Railroads and the American Trucking Associations. That bold proposal was suggested to state regulators meeting last week at the annual convention of the National Association of Railroad and Utilities Commissioners.

The suggestion for amalgamation came from C. Ray Bryant, principal transportation rate expert for the California Public Utilities Commission, at a NARUC workshop clinic on coordination between railroads and motor carriers by providing through routes and joint rates on a single bill of lading.

"The short-range alternative to voluntary coordination," Mr. Bryant said, "may be a progressive loss of traffic to private and exempt trucks. The final alternative to voluntary coordination may be the gloomy prospect of complete coordination accomplished at last through government ownership and operation of our common carrier transportation systems."

Thomas H. Maguire, chairman and counsel of the executive committee of the Western Traffic Association, presented the railroad viewpoint and Fred G. Freund, director of the traffic department of the American Trucking Associations, spoke for the trucking industry.

Reciting the early "wildcat" history of the trucking industry, Mr. Maguire said there was ample justification for the rails' historical aversion to joint rates and through services with motor carriers.

With the growth and maturity of the regulated common motor carriers, he said, "there has been a growing sentiment in both industries toward the establishment of joint rates" where both the railroads and motor carriers believe such an arrangement to be to their respective interest.

He pointed out that not all commodities are susceptible to joint rates and that "any legislation compelling joint rates and through routes would result in a series of shotgun weddings which would neither benefit the carriers nor the public at large."

James M. Landis, of Landis, Seldman, Reilly and Akers and until recently President Kennedy's assistant on regulatory agencies (RA, Sept. 18, p. 54), in an address to the convention, called for a meshing of regulatory policies between the states and also between the states and the federal government.

"The need for the formulation of policies," he said, "is particularly apparent in the transportation field. We need adequate standards which, if they do not dictate, must forcefully guide mergers in the rails, trucks and in aviation. We need revision of our tax policies, not merely as they bear on the land and physical facilities of the rails, but as they affect depreciation reserves and the issue of obsolescence which, with the march of science, is a different animal than it was when the rails held an undisputed monopoly over transportation.

An 11-member committee of the NARUC, took a close look at what it called the recent "conservative" growth of railroad "piggyback" service and offered some searching comments.

The committee, headed by Jefferson C. Church of the Wyoming Public Service Commission, observed that during the first three months of 1961 the number of highway trailers loaded on railroad flat cars approximated the number loaded in the same period of 1960, although the increase for the three-month period between 1959 and 1961 was 45.6%.

Conceding the probability that general business conditions during the early part of 1961 may have accounted

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6. Maintain close watch on your working day; wasted time is your worst enemy.
7. Keep informed about all industry, not just railroading.
8. Increase your talent for persuasively overcoming objections.
9. Learn to control interviews, to direct their course without creating ill feeling.
10. Convince the customer that it is to his best interest to give you those extra cars. Ask for them.

From a speech by J. Russell Coulter, President, Toledo, Peoria & Western, at RSMA Freight Sales Seminar, Chicago.

for the slowdown in the growth of trailer-on-flat-car service, since general railroad carloadings were off 16% in the first three months, the committee expressed the belief that "there may be other factors involved too."

"A recent survey," the committee reported, "indicated that only one out of seven shippers is using piggyback service and probably not more than one out of ten is making use of the standard container systems. Although some shipments may have moved in piggyback service without the shippers' knowledge, the fact remains that the 554,212 flat cars used in piggyback service in 1960 were only about 1.82% of the total carloadings for the year.

"Some shippers report that piggyback service is not sufficiently extensive to fill their needs and that there has been a lack of interest on the part of the railroads to supply the service even though the tonnage is now moving by truck," the report continued

"A plea for more joint rail-motor service is frequently heard. Shippers also say that piggyback service is generally slower than truck service, especially for distances up to 500 miles, and for that reason rates equivalent to truck rates offer no incentive to the use of piggyback service. And, of course, there are the shippers who say that the railroads are paying too much attention to piggyback service to the neglect of their other service."

The committee took notice of the opposition to broadened piggyback service by the Teamsters Union, and questioned whether the growth of piggyback may also have been impeded to some extent because of uncertainty "as to just how far the railroads can go in taking advantage of their low-line-haul costs in pricing and services."

On mergers, a report submitted to the convention envisioned a "tremendous impact on the service and facilities of railroads" stemming from the national trend of railroad mergers now under way.

"The basic criticism of mergers today," the committee report said, "aside

(*Continued on page 33*)

Letters From Readers

NYC Position on Mergers

President A. E. Perlman of the New York Central expressed concern last week with published reports that he had "closed the door" on further merger discussions with the PRR (RA, Sept. 25, p. 5).

Mr. Perlman has advised Railway Age as follows: "The fact is that I am ready at any time to sit down and discuss any merger with any eastern rail-

(*Continued on page 33*)

WATCHING WASHINGTON WITH WALTER TAFT

• **ANOTHER "HOLDING YEAR"** is about all 1961 has turned out to be for the railroads so far as federal legislation is concerned. A "holding year" is one in which management wins are recorded principally in defeats of proposals adverse to the industry rather than advancing the industry's own legislative program.

THE INDUSTRY'S PROGRAM features the "Magna Carta" appeal for "four freedoms"—freedom from discriminatory regulation, freedom from discriminatory taxation, freedom from subsidized competition, and freedom to provide a diversified transportation service. This got nowhere in the session of Congress which adjourned last week.

BUT, Congress' failure to act on bills to emasculate the 1958 Transportation Act's rate-freedom provision was a real victory for the railroads and their employees. The emasculators are S.1197, the bill to require that ICC consideration of competitive rates include tests which, the Commission says, would bring "chaotic uncertainty in rate-making"; and S.1089, which would condemn competitive rates where they might "substantially" lessen competition between shippers at competitive points and those lacking similar carrier competition.

OTHER RAILROAD WINS were reflected in Congress' failure to do anything about top-priority items on the program of the Railway Labor Executives' Association. These are proposals to repeal or render inocuous the 1958 Act's service-abandonment (train-off) provisions, and to suspend the ICC's power to approve railroad mergers. There was an important management victory on the positive side, i.e., repeal of obsolete provisions of the 1916 Mail Pay Act, which paved the way for REA Express' operation under its new contract with the railroads.

THE VICTORIES of the "holding" type, however, are temporary. Since the same Congress will reconvene in 1962, all pending legislation remains alive. So proponents of the adverse proposals may be expected to launch their big push in that election year. And proponents of the rate-freedom emasculators include President James R. Hoffa of the International Brotherhood of Teamsters, as well as truckers and water carriers.

MEANWHILE, this year's legislative output did include several laws of interest to the railroads. Among them was the Highway Tax Act, which increased levies on trucks, but not to levels recommended by President Kennedy. Moreover, Congress provided other largess for railroad competitors notably the expanded federal-aid airport program.

ALSO APPROVED was an act giving the ICC more power to delegate functions to its staff, the Housing Act with commuter-aid provisions authorizing federal loans to state and local agencies for urban transportation facilities, a liberalizer of the Railroad Retirement Act which was not opposed by the railroads, extensions of the 10% fare tax and of the 1958 Act's loan-guaranty provisions, and establishment of an international travel office in the Department of Commerce.

DAMAGING OF FREIGHT being moved by for-hire carriers in interstate or foreign commerce became a federal offense under still another law passed this year. This enactment came after new automobiles shipped by railroad, in piggyback service and on rack cars, had been damaged by acid sprayed on them while in transit.

C&S Forces Use More Trucks

► **The Story at a Glance: Communication and signal maintenance forces are making greater use of trucks than ever before. The switch from camp cars to trucks and house trailers has been made by several railroads for their signal construction forces. The trend to trucks brings up the problem of whether to purchase or lease them.**

Two factors have helped increase the use of trucks by railroad signal and communications departments:

- The tremendous road building programs carried out by local, state and federal governments, which have made railroads more accessible from highways.
- The postwar boom of CTC installations, which has reduced the number of main tracks and at the same time often provided a road along the remaining mainline.

"Tracks are for trains, not camp cars or motor cars," is one operations officer's comment on trucks vs. track motor cars. A western railroad purchased trucks for its signal maintainers covering a 200-mile, single-track CTC territory because existing highways made railroad locations easily accessible by truck. Also, the railroad purchased the trucks for $30,000 less than it would have cost to provide track motor car indicators over the 200 miles of line.

The Pittsburgh & Lake Erie does not operate motor cars in either the signal or communications department, except in extreme emergency, reports D. W. Shackley, superintendent signals and communications. The maintenance personnel in both departments are equipped with half-ton utility body trucks.

"We have standardized on the utility body with enclosed bins on either side and a sliding roof on the top, which extends to completely cover the bed portion. This type of body provides ample storage for tools and material. And, as it is completely closed and can be locked, it is not necessary to remove the general maintenance tools and material at night if a truck is parked outside.

"Since the installation of CTC, we have a road along our right-of-way at most places," says Mr. Shackley. "Considerable delay was experienced with the use of motor cars and we have found truck operation far superior in production efficiency."

The St. Louis-San Francisco, however, has found both trucks and track motor cars useful. According to R. W. Troth, general superintendent communications and signals, traveling or outlying signal maintainers, and both communication and signal terminal maintainers, are provided with one-half-ton pick-up-type trucks equipped with storage bins on each side. In outlying territories, the extreme mileages make truck operation superior to motor car operation. In terminal areas, motor car operation is difficult because of the large number of train movements.

"All section line-of-road signal maintainers and division linemen are equipped with track cars, for the reason that we do not believe facilities assigned to them can be properly inspected and maintained by use of trucks. All communication and signal gangs are provided with 1½ or 2-ton trucks, most of which are equipped with 'A' frames and power winch for handling heavy material," says Mr. Troth.

Northern Pacific linemen carry track cars piggyback on trucks, D. C. Hill, superintendent of communications, reports: "Trucks have been furnished the linemen equipped with a body especially designed to carry certain tools, material and a motor car as well. This motor car is loaded and unloaded by means of a power winch," says Mr. Hill. The combination truck-motor car has been the answer to clearing up line wire trouble with a minimum of delay. On the NP this is more important than ever because of the road's extensive installations of line-wire carrier providing a system-wide dial telephone service and a Teletype network.

Switch to Utility Trucks

For communications maintenance equipment men, the NP switched from panel trucks to utility trucks. Radio caused the switch, as Mr. Hill explains: "We have for many years provided our equipment maintenance employees with trucks, which were of the panel type. But with the advent of train radio it became necessary for our maintenance employees to carry a larger assortment of material, with the result that for the past five years trucks have been furnished with bodies somewhat similar to those in use by the equipment maintenance employees of the telephone companies."

The piggybacking of motor cars on trucks as used by the Milwaukee Road, is explained by Donald Wylie, communications engineer: "It is our policy to equip district linemen with pickup trucks equipped with a motor-car-carrying body. The motor car is carried on the truck at all times when not being used on the rail.

"Use of trucks by linemen has several important advantages. First, the number of motor cars per lineman can be reduced from a former average of three, to the present assignment of one car. Second, the lineman is able to reach and clear wire breaks in one-half the time or less (generally much less) than if a motor car alone were used. Third, the greatly reduced travel time on rail permits a substantial increase in actual maintenance work performed. This is augmented by the ability of the truck to easily transport materials.

"To date we have purchased all vehicles outright. No plans have been considered for the leasing of such equipment," reports Mr. Wylie. His thoughts are echoed by the Frisco's Mr. Troth, who says "trucks are purchased outright, as we believe it is more economical than to lease them."

A midwestern railway which purchases trucks for the signal department does so because of the savings of the rental fees. Also, railway forces maintain the trucks and a good portion of the labor involved is not "out-of-pocket" expense. This road purchases panel trucks for its terminal communications maintainers. When maintenance gangs, such as line gangs, work out along the line where highways are available, the railroad leases trucks for transporting men and material.

A western railroad started leasing trucks for its communications and signal maintenance forces, but as they began using specialized equipment and accessories, the road turned to purchasing trucks. The majority of trucks and cars of this road are owned by it. The road has suitable facilities and employees to maintain its fleet of trucks and automobiles. While the savings of ownership of automobiles over rental is comparatively small, the savings from truck ownership are considerable, the road reports.

Rental rates on specialized equipment trucks (such as the utility type) when available, are usually high, this road reports. Rental concerns also desire to lease on a long-term basis for these specialized types of trucks. The road's signal officer reports that not only is there a great saving in rental cost vs. cost of ownership and maintenance, but advantages in making alterations and various body changes as desired are realized. Trucks may be moved from one state to another without complications. Privately-owned trucks with suitable maintenance facilities are much more dependable, resulting in a minimum of lost time to gangs, the signal officer says.

Automatic Train Operation Is

Numerous tests and studies show that automatic train operation is feasible from a technical standpoint. Equipment is available today to run trains without crews—and without remote control by human beings. There are problems, though. Foremost among them are those posed by the attitude of labor unions, and the question of where the money will come from. Here is a progress report on the problems, and the possibilities, of automatic train operation.

By ROBERT W. McKNIGHT

Signaling & Communications Editor

The New York City Transit Authority's crewless subway train is probably the best known automatic train installation in the country. The train is now undergoing final testing on the Grand Central Terminal-Times Square shuttle.

NYCTA Chairman Charles L. Patterson has said the automatic train will go into service this week. Sources close to the NYCTA and equipment manufacturers indicate that minor equipment adjustments may delay in-service operation a week or 10 days. The intent is to run the train automatically, but to carry an attendant.

Persons using the Grand Central Terminal-Times Square shuttle, a TA spokesman says, will have the choice of riding the automatic train or one of the regular crew-operated trains.

The three-car automatic subway train operates as follows: Control is by a 100-cycle alternating current superimposed on the rails at varying code rates. Programming for the train's movement —when it is to depart from either station—is set by an automatic dispatching unit which has a time clock and a 35-mm film with holes in it. A light source is directed toward the film. A photoelectric cell responds to the light when it passes through holes in the film.

With the train in a station, say Times Square, the doors closed and ready to go, 270 code (270 pulses per minute of 100-cycle alternating current) is fed through the rails from Grand Central Terminal toward the train. Receivers on the lead car pick up the code, which results in the actuation of controls to start the train. It accelerates to 29 mph, and maintains that speed.

At a predetermined point in approach to Grand Central Terminal, the train passes an insulated joint onto rails carrying 180 code. Upon receipt of this code, the train is controlled to decelerate to 5 mph until it passes a second insulated joint in approach to the Grand Central Terminal station. At this point, the train moves into a 0 or no-code zone and is brought to a stop by a service brake application within ± 5 ft of a specified stopping point.

After the train comes to a stop, 75 code is fed into a wire loop laid between the rails. Receivers on the train pick up the code to actuate door controls for unlocking and opening the doors. The headlights change to tail lights, the tail lights to headlights. The destination sign "Times Square" becomes lighted, and the "Grand Central" sign lighting is extinguished.

Next, the automatic dispatching unit reads the 35-mm film and initiates controls to remove the 75 code after the doors have been open a predetermined time. Removal of the code actuates controls for closing the doors and releasing the brakes. Equipment at Times Square feeds 270 code into the rails toward the train at Grand Central Terminal. Upon receipt of the code by the receivers on this "lead" car, the train is started, accelerates to 29 mph and returns to Times Square.

Elsewhere on the ATO front, the Russians have reportedly made use of a special-purpose digital computer on a locomotive which was fed data, prior to starting, about the profile of the route to be traveled, speed restrictions, station stop timing, etc. From this information, plus that picked up by the moving train (such as speed and distance traveled), the computer made the necessary calculations for automatically controlling the train. The only human action was to turn the ATO equipment on at the beginning of a run and turn it off at the end of the run.

At a coke oven installation near Pittsburgh, Pa., a quench car operation is completely automatic. At the beginning of the loading cycle, the car (moved by a locomotive) travels past the oven at a rate directly proportional to, and controlled by, the travel of the ram that shoves coke out of the oven into the car. Thus coke is loaded evenly into the car.

When the ram reaches the end of its travel and the car is loaded, a circuit is closed which automatically starts the locomotive pushing the loaded car toward the quench station. The locomotive stops so that the car is correctly positioned, which automatically turns on the water for quenching. Completion of the quench cycle starts the locomotive pulling the car to the coke wharf for unloading.

At the wharf, the car gates automatically open, and the car "jogs" along the wharf while the coke slides out. At the completion of unloading, the car gates close, and the car and its locomotive wait until the next oven is ready for pushing (unloading into the car). A mechanism at the oven (when the ram is in position) signals the coke car locomotive to move the car toward the oven.

In the summer of 1960 an ATO test was made on a 10-mile section of the Canadian National near London, Ont. The test was to simulate conditions for automatic control of ore trains on the Carol Lake Railway. For most of the testing, a train of 35 cars with a gross of 2,000 tons was hauled by a 1,750-hp diesel-electric locomotive.

For the purpose of the tests, no wayside supervisory control and control coding equipment was installed. The desired codes were generated by locomotive-carried equipment, and applied inductively to the locomotive receivers of the control sensing equipment. Inert tuned coils were used to provide wayside grade and slow order markers.

Reports of final tests stated that runs were made on a section of track having a descending grade of about 0.9 to 1%, for about nine miles. For these runs, the specially equipped locomotive was MU-coupled to another standard, diesel-electric locomotive. On one run with 76 cars totaling about 6,600 tons, the specially equipped locomotive was in control. The report states that this locomotive automatically handled the train to everyone's satisfaction, including down grade where both air and dynamic braking were required to properly control train speed.

It is understood that locomotives for the Carol Lake are now being equipped for this automatic operation, which may be in service next spring. While "no one is talking," this item recently appeared in "Iron Ore," the employee magazine of the Iron Ore Co. of Canada:

"Nearly six miles away from the concentration plant on Wabush Lake is the Smallwood mine. This is the ore body destined to provide the first ore to be concentrated in the Carol project.

"A short railway will carry the ore from the mine to the plant—55,000 long tons each day. To do this, 46 loaded trains must leave the mine daily, which will mean there will always be a train traveling along the track in each direction, passing every 14-15 minutes. The railroad will be fully automated, electrical impulses going through the rails will control the train to start, speed

Not a Railroad 'Pipe Dream'

"As far as TWU is concerned, gadget or no gadget, the motormen and conductors will stay on the trains."

Michael J. Quill, President, TWU

up, slow down, apply brakes, reverse or forward motion and stop. Even the switches for shunting will be operated automatically. During actual loading and dumping the trains will be under remote manual control by an operator at the loading pocket and in the crusher building. The ore cars will side dump directly into the gyratory crusher and this operation will take about 1½ minutes for each car."

ATO's advantages are worth serious consideration:

- Reduction in wages, due to elimination of train crews.
- More efficient operation of trains, resulting in savings in fuel consumption.
- Great utilization of existing track, due to better control of trains.
- Better service to shippers, through improved train operation.

However, opponents of ATO cite these disadvantages, which also should be considered:

- Increased labor costs, because of the greater number of electronic technicians, signalmen and mechanics required to maintain ATO equipment.
- Increased maintenance expenses, due to a greater amount of ATO equipment on locomotives and on the wayside.
- Considerable capital expenditures to provide the ATO.
- When ATO does fail, there may be long delays because no men are on the train to make emergency repairs.

Where do we stand today? ATO has proved itself technologically feasible. The first installations probably will be on so-called captive railroads, on industrial roads, and in specialized situations on rapid transit and Class I railroads. Also, switching, short-line and terminal companies will probably find certain situations where ATO will prove out.

The Bay Area Rapid Transit District in San Francisco plans to install a completely automatic passenger transit system with crewless trains. The Carol Lake tests indicate what can be done with "captive roads" and shows what can be done with through movements from one point to another. This might well be a preview of the first applications of ATO to Class I roads for handling coal, ore and other bulk movements. Also, it could do well for other moves where entire trains run between major terminals without breakup. Combining ATO, computers and CTC could provide what many railroad men would call the ultimate in automation of railroad operations.

The big problem in ATO is the one of personnel. A solution, cited as one on which both management and labor can agree, is to apply automatic train operation to the special situations mentioned previously. Where existing crews are displaced by ATO, these solutions are mentioned: (1) transfer the employees affected to other territories on the railroad; (2) re-train and transfer the men to other jobs. Also, it is assumed that normal retirements will handle the problem of a temporary surplus of crews caused by installation of ATO.

NYCTA Chairman Patterson has said: "There is nothing revolutionary, radical or untried about the processes involved [in the automatic subway train]. It is an application of thoroughly tested methods. I would say rather, that it is simply a step forward." Plans are to staff the automatic shuttle train with an attendant. Mr. Patterson says that jobs will be found elsewhere in the city's transit system for any motormen or conductors displaced by the automatic train.

A different view, however, is held by Transport Workers Union President Michael J. Quill, whose union has contracts covering about 3,100 motormen and about 5,000 conductors on the city's transit system. Following the automatic subway test demonstration last fall, TWU officers sent a telegram to Mr. Patterson, which said, in part: "In the autumn of 1961, when we open negotiations for a new contract for our members, we will demand . . . iron-clad guarantees on job security and protection against your various schemes for further automation on the transit lines."

A TWU spokesman recently re-affirmed this position to Railway Age. He said that automation and specifically NYCTA's "robot train" will be discussed at the union's constitutional convention beginning in New York on Oct. 2.

Politics enters the situation at this point. What happens in New York is not only interesting, but may set a pattern for future political action in automation problems.

Since the TWU helped incumbent mayor Robert F. Wagner successfully win the mayoralty nomination of the Democratic party last month, political observers believe the in-service operation of the automatic subway train may have to wait until the outcome of the Nov. 7 mayoralty election.

Another ATO problem, secondary to labor, is that of financing. But if the enthusiasm shown by Wall Street for automation and ATO is any indication, railroads planning ATO installation should not find it difficult to obtain the necessary money. One security analyst sums it up this way: "I think automatic train operation will pay off, if we can solve the labor problem. It is going to take some hard, long and searching talks between management and labor to solve this problem, but in the long run it will pay off. Look what automation has done to save the soft coal industry from bankruptcy."

"Completely automatic railroad operation . . . . . will evolve because of the need to minimize employee costs through more automation, and to realize the benefits of computer-type planning of operations that will promote maximum utilization of the railroad plant and make for efficient transportation at the lowest possible price to the public."

Ernest S. Marsh, President, AT&SF

BAY-WINDOW CABOOSES stress safety and utility, have cushioned roller-bearing trucks and rubber draft gear.

New SP Cabooses Stress Safety

GOOD VISIBILITY along sides of train is permitted by bay-window design. Area has reversible seat, removable arm rest and sliding safety glass window.

Two hundred bay-window cabooses combining the latest safety and utility features have just been delivered to the Southern Pacific.

The 38-ft 40-ton cars, designed by the SP's Mechanical Department in collaboration with the Operating and Safety Departments, were built by the Pacific Car & Foundry Co., Renton, Wash.

Delivery of these cars, which started in July, is part of the SP's plan to speed its $51-million equipment program. Acceleration of equipment delivery was announced at midyear (RA, July 3, p. 9) by President D. J. Russell when he said the "answer to any temporary economic recession is in terms of the industry's willingness to make hard cash investments in equipment and facilities." He said the road was stepping up delivery of equipment in its 1961 program to get these capital expenditures quickly into the economy.

The new caboose cars have a number of safety features. Among them are safety glass windows, rounding of all corners inside the car, and a safety

handrail or "grab" bar, 6 ft 1 in. above the floor, that extends the full length of each car over the center aisle. The hemlock-top floor is covered with a special paint that produces a non-skid surface. Grid-type end platform and steps contribute to safe footing under all conditions. White painted handrails minimize the chance of misjudging handrail position when boarding the car.

The bay windows give better visibility alongside the train, compared with cupola-type cabooses. The bay area in each car is equipped with a double reversible seat, removable arm rests and foot rests. Highback swivel-type passenger seats are installed in the other areas. Bay windows open horizontally, the body windows vertically.

For improved riding qualities, the cars are equipped with rubber draft gears and special trucks designed with swing hangers and elliptical springs for maximum cushioning of roadway shocks. Trucks have roller bearings on 5-in. by 9-in. journals.

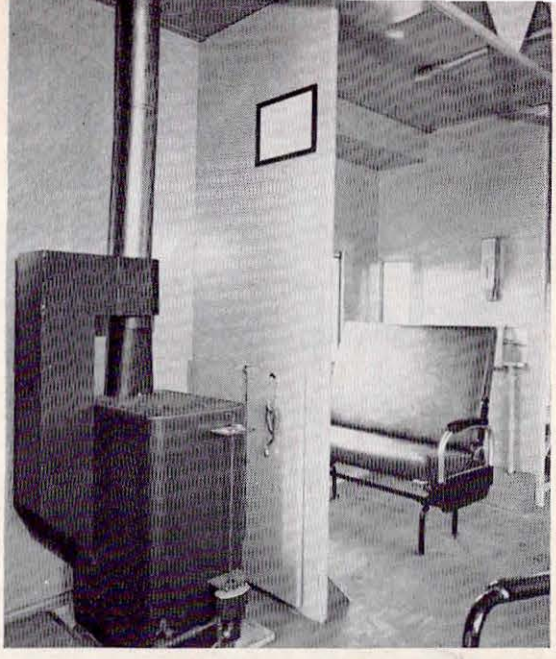
Each new caboose is kept comfortable in low-temperature territory by means of a circulating heater which burns diesel fuel oil. Fuel, carried in a 100-gal. tank under the car, is lifted by an electric fuel pump to the heater. The fuel tank can be filled from either side of the car through a capped filler pipe. A liquid level fuel gage shows how much fuel is in the tank. The heater smoke stack is equipped with a wind draft neutralizer.

Drinking water is cooled by electric refrigeration. The water fountain and paper cup dispenser are on a partition in the bay-window area. On the other side of the partition is a refrigerator water cooler unit which has a rubberized protective padding at the corner to prevent injury.

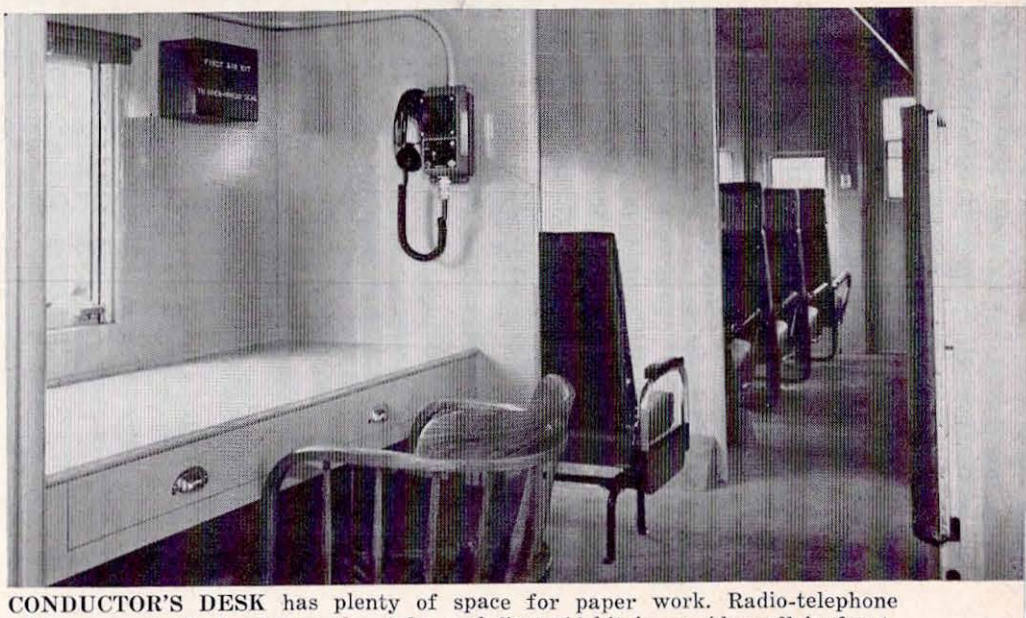
A wash basin is conveniently located between the enclosed toilet and the electric locker. Water for the basin, toilet and water cooler is supplied from a 150-gal. overhead water tank. Additional equipment at this location includes a paper towel dispenser, a fusee box, three dry chemical fire extinguisher tubes and a fire extinguisher pump.

Radio-telephone equipment, now being more generally used throughout the Southern Pacific System, is featured in the new cabooses. The hand set is at the conductor's desk. The radio telephone transmitter and receiver power package, and the direct-drive alternator for electric current, are enclosed in a steel cabinet. The antenna and antenna ground plane are mounted on the caboose roof.

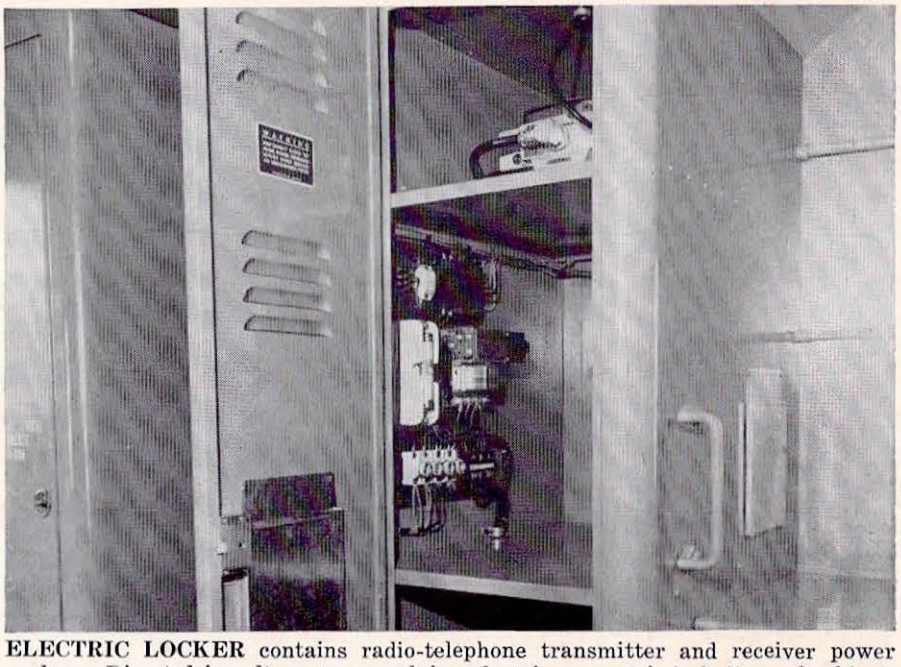
The cars are electric lighted throughout, and electric marker lights are mounted on the roof.



CONVENIENCES include heating plant that burns diesel fuel oil pumped from 100-gal. tank located under car. Water for water cooler, wash basin and toilet is supplied by a 150-gal. overhead tank. Water is supplied through a closed system similar to that employed in gallery cars and approved by U.S. Public Health Service. Safety "grab" bar, shown in top right corner, extends full length of car over center aisle.



CONDUCTOR'S DESK has plenty of space for paper work. Radio-telephone set is conveniently located to the right, and first-aid kit is on side wall in front.



ELECTRIC LOCKER contains radio-telephone transmitter and receiver power package. Direct-drive alternator supplying electric current is in bottom of cabinet.

WORLD'S LARGEST PASSENGER RAILROAD CARRIES 1,362,000,000 PEOPLE ANNUALLY

On latest subway cars the standard stands... dependable METAL shoes with clasp brakes. Why? Read the words of Charles L. Patterson, Chairman of the New York City Transit Authority.

"After Transit Authority test department reappraisal of all types of braking systems, we have again specified metal shoes, clasp brakes as our standard braking system to be used in conjunction with dynamic brakes on new cars. We are always testing new products but, based on our current test results, we believe this standard offers the best over-all economy and safety of operation for our requirements."

Charles L Patterson

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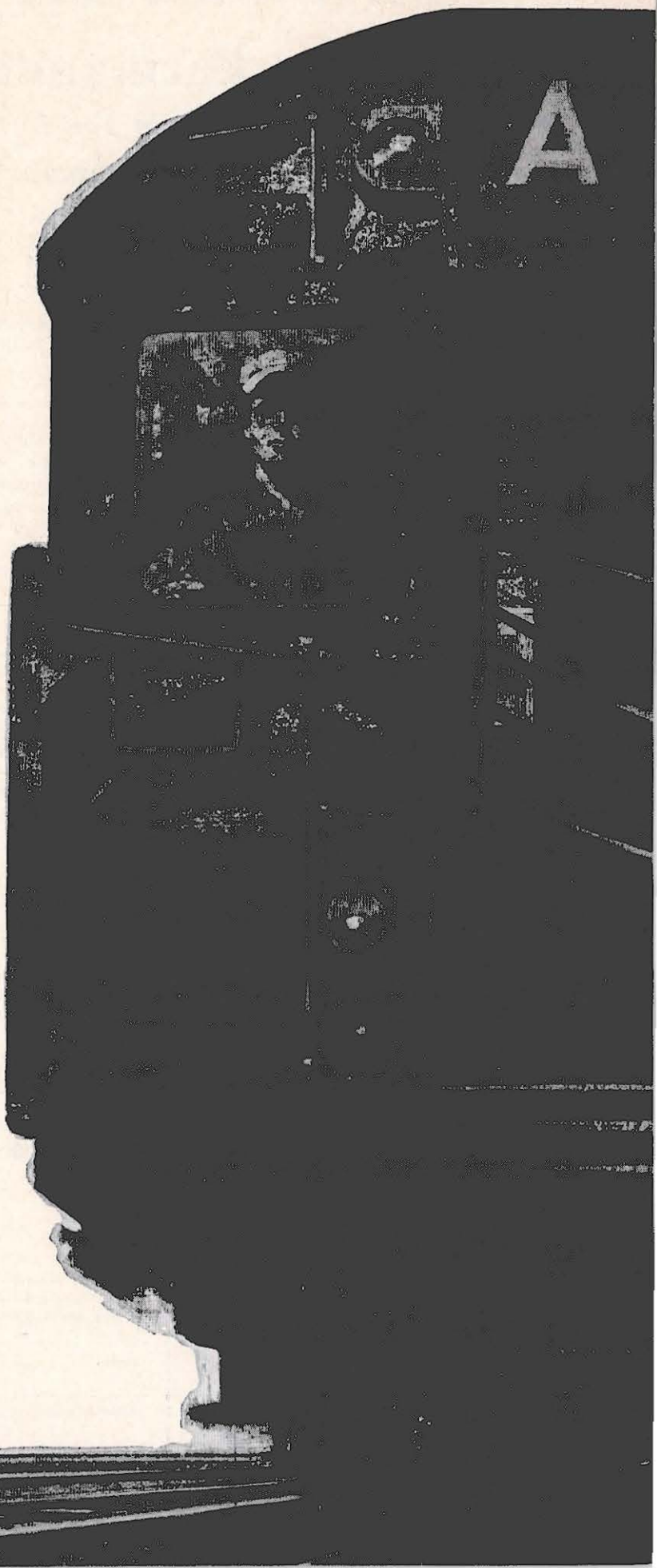
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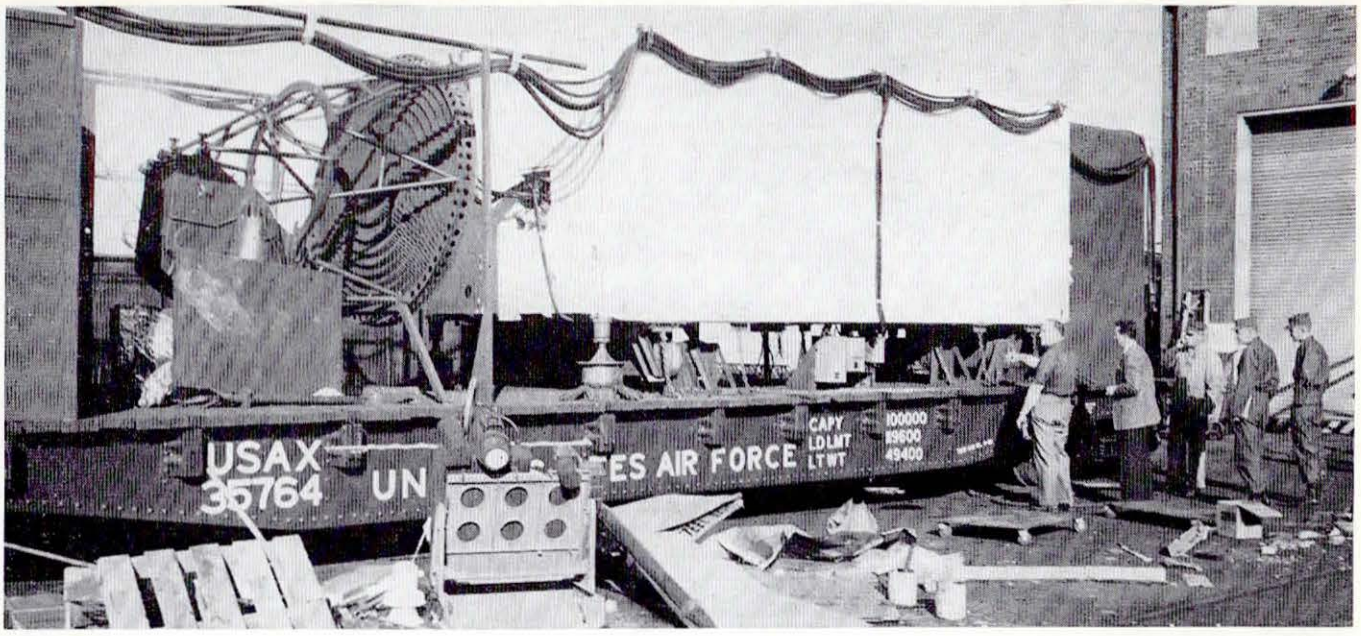


RADAR EQUIPMENT, shock mounted on Air Force flat car, will provide movable targets for SAC training missions.

Special Train Helps Defense

A specially-designed ten-car train is helping to strengthen the retaliatory power of the Strategic Air Command.

The new train, developed by the Air Force and the U. S. Army's Transportation Corps, houses electronic tracking equipment to provide a movable target site for testing the efficiency of SAC bombing missions. It is virtually a self-sustaining city on wheels.

The train was developed because bomber crews soon become familiar with the location of permanent radar installations. This makes the fixed targets obsolete in a matter of months. Relocating a permanent installation means costly and time-consuming construction at a new site. Also, moving the delicate electronic equipment and installing it in a new tracking center usually resulted in damage and breakage.

In December 1960 the Air Force made funds available to the Army's Transportation Depot Maintenance Division of the Utah General Depot at Ogden to develop and equip a train for use as a mobile target site. Using commercial railroad equipment, the Army designed a roving radar unit with complete facilities for the 65 men required to operate the equipment.

Six hospital cars that had seen duty in Korea provided shells for the coach cars. After the interiors were stripped, specialized equipment was installed to provide:

- Power car housing four 150 KW A.C. generators.
- Command car furnishing office space for administrative duties.
- Operation and maintenance car, with complete facilities for testing and repairing the electronic equipment.
- Ready car with recreation facilities.
- Water car and a fuel car, outfitted with aluminum tanks. Normal operations require the train to carry 13,500 gallons of water and 14,000 gallons of fuel for sanitary and heating purposes.

In addition, three flat cars transport the radar equipment. A box car for storage completes the consist of the movable target.

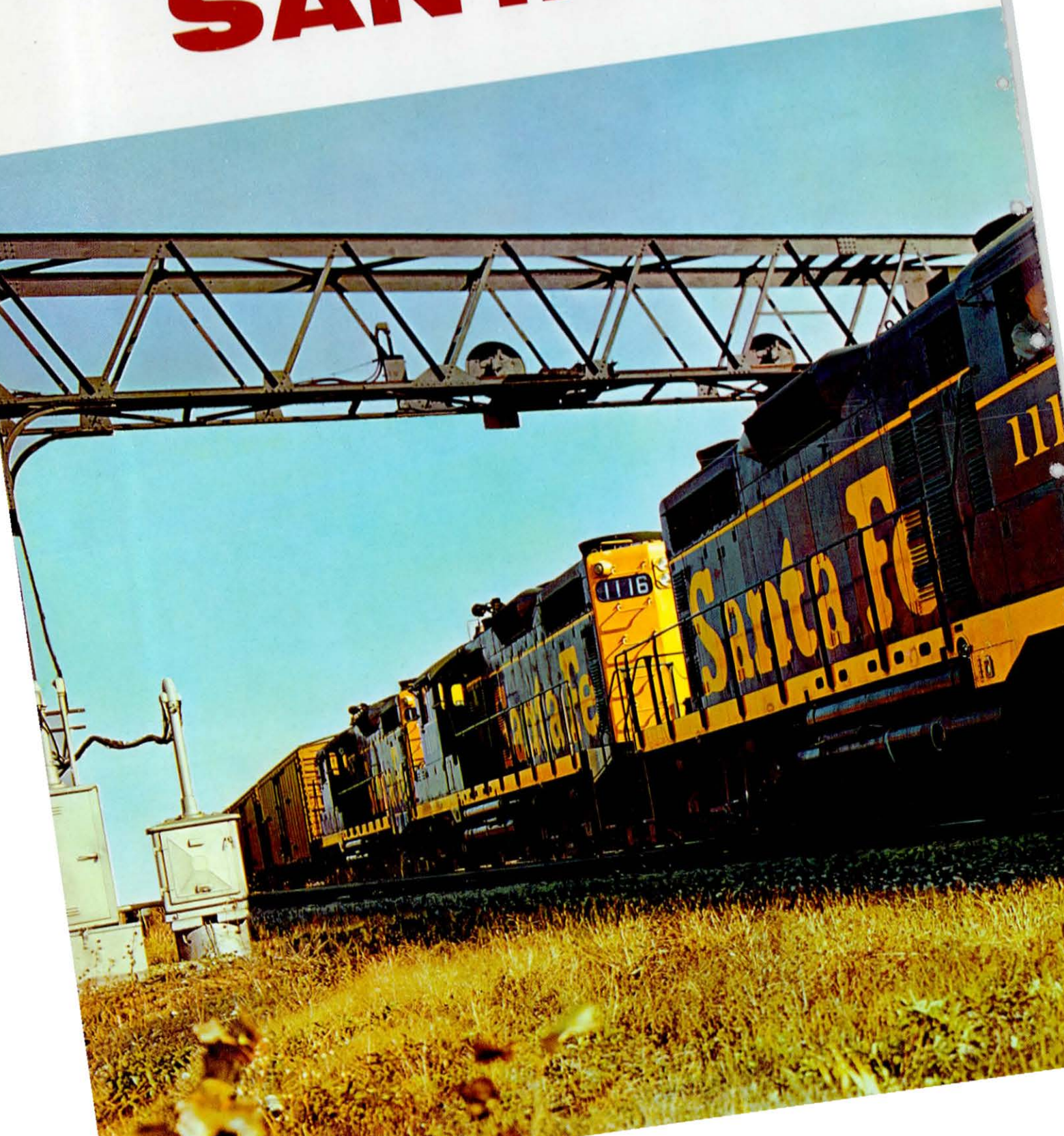
Heating was one of the major problems facing the designers, since the cars would stand independent of any locomotive or yard steam line. Vapor Corporation's Aquazone Heating System supplied the answer. This completely self-contained liquid heating system is used in the personnel cars and in the water and fuel cars.

EASILY ACCESSIBLE Vapor Aquazone unit is heart of self-contained liquid heating system, providing heat for personnel, water and fuel cars.

The box which is the heart of the heating system contains a hot water heater, heat exchangers, pumps, valves, and expansion and reservoir tanks. Stainless steel heat-exchange surfaces resist corrosion and keep maintenance at a minimum. The burner head is designed to eliminate adjustment.

Thirty tons of cable were required to install the radar equipment in the movable tracking center that will help to increase the effectiveness of our defense-measuring equipment.

FIFTY MORE GP-20's Ordered by the SANTA FE



Fifty more General Motors 2000-hp GP-20's are joining the Santa Fe fleet of twenty-five GP-20's at work pulling the freights between Chicago and Kansas City. By turning in fifty 1350-hp freight locomotives, the Santa Fe is exchanging 67,500-hp capacity for 100,000-hp—a gain of 48%. This added capacity enables the fifty new GP-20's to do the work of seventy-four older FT's.

This is the essence of the General Motors Locomotive Replacement Plan.

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RAILROADING AFTER HOURS WITH JIM LYNE

BIGGEST PAY TO SLOW-POKES—An officer close to the top of a large railroad's operating department makes an appropriate observation on my question (RA, Sept. 18, p. 39) about uniform pay for conductors—good and bad alike.

A few years ago, when this operating officer was a trainmaster, he found it necessary to get after a local freight conductor, who used to take at least 15 hours to get his train over the road. The conductor looked him straight in the eye and said:

"I may not be the best conductor on this division but I make the most money."

Premium pay for poor performance does not make much sense to me—and my guess would be that most trainmen (as individuals) would agree.

ACADEMIC RESERVE—I've been admiring a new quarterly publication, "Transportation Journal," issued by the American Society of Traffic and Transportation—the inaugural number being appropriately dedicated to the memory of the late G. Lloyd Wilson.

One article in the journal disturbs me a little, though. Authored by an able teacher, it discusses proposed changes in transport regulation, but with such complete detachment that it does not make too clear the author's own informed opinion. For example, the statement is made that "railroad spokesmen today contend that the railroads are still regulated as a monopoly and that the monopoly no longer exists."

Well, how about it, is this statement a mere self-serving assertion or is it a respectable truth? If I visit the neighborhood of a stockyard, am I an adequate reporter if I say: "There are those who contend that there is a somewhat unpleasant odor around here"?

Transportation policy in this country desperately needs the critical attention of competent academic authorities who will speak out plainly. Some do. More should.

PENSIONERS AS PASSENGERS—Art Williams, president of Stanray, isn't sure the big airlines' program of flying teen-agers at reduced rates is as smart as that of a smaller airline (Mohawk) which offers its bargains to people of retirement age. Art figures the youngsters are already sold on flying, whereas a lot of the oldsters aren't. He suggests that railroads might do well to try to hold onto the patronage of the older people—to whom reduced rates are an effective inducement, seeing how many of them are pensioners.

The Mohawk people (Art goes on to report) have some flights listed as "Gaslight" or "Gay Nineties," their planes with appropriate fittings—including can-can costumes on the hostesses.

(I'm trying to visualize a railroad counterpart to this last item—maybe trainmen with handle-bar mustaches and coal oil lanterns; and cars lighted with Pintsch gas—which latter, incidentally, when provided with mantles, gave better light than some of today's cars have.)

RAILROADER, URBAN IMPROVER—That book "Future of our Cities" (by R. A. Futterman) that I mentioned here September 18 is especially enthusiastic about what's ahead for Norfolk. The great development that's going on in that area the author attributes in large measure to two men, one of them Charles Kaufman, local counsel for the N&W, whom he calls "among the most admirable civic leaders in America, a sort of Albert Schweitzer whose religion is urban civilization." Quite a contrast to the situation in a lot of big towns, where little heed is given to railroads and railroad men in planning improvements and rehabilitation. Strange, railroads having been pioneers and still being able leaders in industrial development.

Railroads fathered the cities and are their natural allies. Excessive highway development scatters industry and housing all over the landscape—depressing city centers, and siphoning freight off of the rails. Where a city lets highway planners dominate its development, it is like picking a doctor who's in the undertaking business on the side.

PLANNERS ARE POWERFUL—A lot of people shy away from city planners, believing urban growth should be left mostly to normal business development. The only trouble with ignoring these fellows is that they have got their big hands into the public till—local, state and national. So they move ahead ten times as fast as enterprises do which have to raise their own capital. Interests that don't get the planners' attention run the risk of being crowded off the map of the future which is now taking shape.

Look how the government is promoting air transportation—and is being urged by a Presidential "task force" to promote it even more. Meantime, no attention is given to ways and means of preserving railroad services which are threatened with extinction, and are certainly as much in the public interest as improved air transport is.

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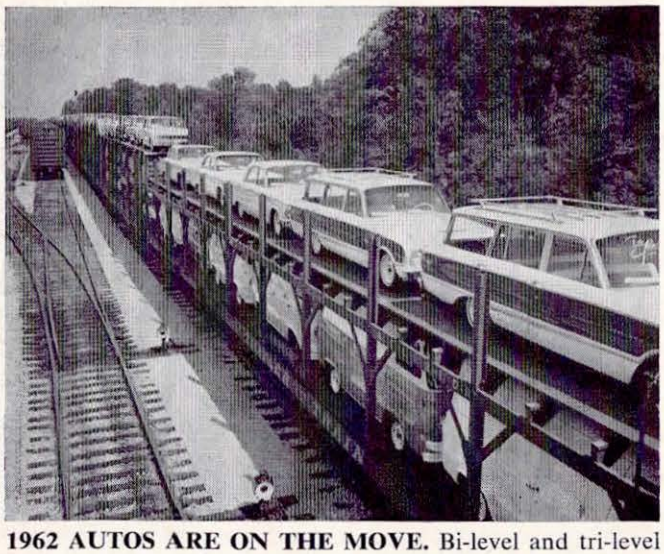
B&O'S "AUTO-PORTER" has been tested in its first revenue loads to be carried in this country. Sixteen French-built Renault Dauphines left the Baltimore Locust Point Marine Terminal Sept. 19, bound for St. Louis. Auto-Porter is an Americanized version of an auto-carrying car widely used in Europe. Built by Graaff-Elze in West Germany, it is being demonstrated here by North American Car Corp. and B&W Enterprises, Inc. (RA, Jan. 23, p. 35; Sept. 18, p. 7).

Pictures in the News This Week

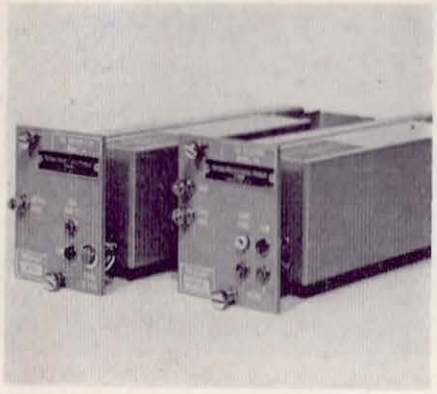
RAIL AND AIR CARGOES are interchanged between Atlantic Coast Line and Pan American World Airways at Miami International Airport (RA, Sept. 25, p. 7). The agreement applies between the eastern U.S., the Caribbean, and Latin American countries.



1962 AUTOS ARE ON THE MOVE. Bi-level and tri-level rack cars shown here at NYC's Fairlane yard serving the Ford plant at Lorain, Ohio, are loaded with 1962 Ford Falcon and Futura automobiles and pickup trucks.

NEW CANADIAN NATIONAL SYMBOL (RA, Jan. 2, p. 16) won a top design award in the annual showing of the best in Canadian typography, for designer, Allan Fleming (left), and CN director of public relations, Charles Harris.

NEW PRODUCTS REPORT FOR SIGNALING AND



Battery Chargers (RA-3)

A new line of battery chargers uses selenium rectifier stacks. Selenium was selected because the self-healing characteristics of the selenium plates make them less vulnerable to damage resulting from high voltage surges. The new line of chargers provides increased efficiency, wider range of adjustment, and quieter operation. A small number of basic types of chargers will meet a wide range of rating requirements. *General Railway Signal Co.*

Multiplex System (RA-6)

The C-8102 Modem system communicates binary data for teletypewriter, telemetering, remote control, telephone signaling and data transmission. It is a multiplex system that provides up to 18 data channels for a single 3-kc voice channel. Maximum transmission rate is 75 bits per sec, equivalent to 100 words per min. in teletypewriter operation, on each channel. The data channels consist of tone signals separated by 170 cycles. *Collins Radio Co.*

Frequency-Shift Carrier (RA-1)

New frequency-shift transistor-operated carrier equipment can provide as many as 82 independent narrow-band carrier channels over a single pair of line wires. Applications include carrier link control to extend CTC code lines, to reduce line wire requirements in high-speed coding systems for interlocking consolidation, etc. The equipment—transmitter, receiver, and repeater—will operate in a frequency range of .425 kc to about 35 kc. It is suitable for general use at keying speeds up to 40 cycles per second. Transmitters and receivers are being built to the same panel module, approximately 3 in. wide by 3½ in. high. Adaptors will also be available for mounting the units on standard GRS type B relay racks. All units operate with input voltages over the range 19-35 volts. Each unit is plug-connected into its mounting rack and uses plug-connected frequency determining units. The operating channel of a transmitter, receiver, or repeater may be changed to any other channel by simple substitution of frequency units. *General Railway Signal Co.*

SSB Carrier System (RA-4)

The type 34A carrier system is a stackable, single sideband, suppressed carrier system, designed primarily for light-route radio applications although it is suitable for other four-wire baseband applications. It will provide a highly reliable, easy to maintain system with performance characteristics comparable to heavy route systems and will meet the requirements for direct distance dialing, voice and data transmission. The channels comprising the basic eight-channel group are independent of each other. Group equipment, with the exception of the group carrier frequency oscillator for which standby is an option, uses only passive circuitry. The group equipment permits stacking two eight-channel groups above the basic group, providing a 24-channel system. The units comprising the 34A system plug into a standard universal equipment shelf. Units of the 23B Datatel, 53B order wire and signaling equipment and 51C alarm, control and supervisory systems may also be plugged into the same shelf. *Lenkurt Electric Co.*

High Power Inverter (RA-7)

A new DC to AC inverter, style F-30, provides approximately two and one-half times the power capabilities of previous types. It is designed for use as a standby power supply or as a sole power source for carrier equipment, train graphs, meters, and AC track circuits. The inverter is powered from a nominal 12-volt battery and will deliver up to 250 VA at an output of 120 volts. Efficiency is approximately 90%. Conversion from DC to AC is accomplished by the use of a conventional resonant reed-type vibrator, but the vibrator serves only as a frequency control and driving element. The limitation of load current is not dependent on the current capacity of the vibrator contacts, since transistors are used as switching elements for the heavy load current. Also, if this inverter is used solely for coded AC applications, the coding may be done in the driving circuit where low-coding current will extend coding contact life. The new inverter is approximately 10 in. wide, 12½ in. deep and 11 in. high. *Union Switch & Signal—Division of WABCo.*

Fiberglas Phone Box (RA-2)

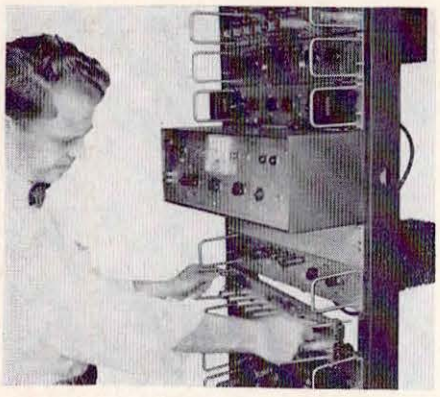
Two sizes of Fiberglas telephone shelter boxes conform generally to AAR Communications Section type A. One has a plywood backboard measuring 28 in. high by 24 in. wide, while the other has a backboard 28 in. high and 18 in. wide. Both are 13¾ in. deep with cover hinged at the top, and are furnished, as required, with hardware for mounting on wood pole or on steel pipe mast of 3-in., 4-in. or 5-in. inside dia. *Western Railroad Supply Co.*

Solderless Terminals (RA-5)

New solderless terminals are made of 0.040-.045 in.-thick copper and are electroplated with a heavy coating of tin. The terminals are designated Heavy Duty Signal Specials. The insulation is of vinyl, or nylon if specified, 1/32 in. thick, and extends over the wire insulation to reduce vibration at the contact area. The 628-1, -2, -3, and -4 insulated test terminals incorporate an insulating bushing. All fit tools now in service. *Railroad Accessories Corp.*

Light-Route Radio (RA-8)

Type 71 light-route radio is a family of low-cost FM radio and associated equipment that will provide an economical installation for a variety of light-route applications. It has been designed specifically to provide toll grade service for up to 24 multiplex voice channels in the 150, 300 and 450 mc frequency bands and up to 48 channels in the 900 mc band over distances of up to 10 microwave hops. *Lenkurt Electric Co.*



Microwave (RA-9)

The CLR-9 wideband, microwave relay equipment is designed to provide duplex, point-to-point transmission of a wideband, composite signal. Operating in the 6,000 mc common carrier, industrial and government bands, the CLR-9 microwave terminal consists of a highly stable, frequency modulated, reflex klystron transmitter, providing 1-watt RF output and a low noise superheterodyne receiver designed for maximum linearity. A waveguide isolator separates the transmitting klystron from the transmission line and antenna so that maximum linearity is maintained. No blowers are required in any part of the equipment. Heat from the klystrons is dissipated through integral heat sinks which are cooled by convection. Printed wiring boards are used in all video and low-frequency assemblies to provide stability and uniformity of circuit characteristics. This feature also assists maintenance by elimination of congested chassis wiring. Klystrons may be tuned, and most servicing accomplished, from the front of the equipment. *Philco Corp.*

Crossing Gate (RA-10)

A new and improved mast-mounted crossing gate mechanism, designated Type D, is similar to the GRS Type B, but is smaller. The cover is rectangular in shape and is padlocked to the case by a hasp and eyebolt at the top. Wire entrance is via 1½-in. flexible metal conduit at the top of the case. In the hold-clear, two Type B relay cores and two single-wound full length coils are used to simplify the design. *General Railway Signal Co.*

Relay Control (RA-11)

Three units for control of indication lights and for bell or buzzer indication on control machines in CTC systems, using solid state electronics, have been developed. These units replace relays performing the same functions, while maintaining a high degree of reliability. System maintenance is simplified, as the units are plug-in and easily installed or removed, and are sealed in an epoxy resin to form an encapsulated unit. *General Railway Signal Co.*

Plug-In Relays (RA-12)

The PN-150 and PN-250 family of plug-in relays has been expanded. New relays in the single width PN-150 series are the PN-156 two-rate charge relay and PT-150 thermal relay. The PN-156 is the equivalent of the DNL-46E and DNL-46L shelf type relays. It has been designed so that one relay can be used with practically any battery now in general usage. Relay characteristics are matched to a particular battery by externally interconnecting terminals on the mounting base, as directed on a permanent instruction plate which is fastened to the mounting base. The interconnections provide the proper arrangement of internal resistors with the relay coil. The PT-150 thermal relay is the equivalent of the TH-10 type relay. The characteristics have been improved so that one relay covers the total adjustable time range which previously required three different relays. New relays in the double width PN-250 series include AC vane relays, code following and transmitter relays and flasher relays. *Union Switch & Signal—Division of WABCo.*

Silicon Rectifier (RA-13)

A medium-power-range silicon bridge rectifier, called the Power Point, has current ratings from 10 to 25 amp at maximum ambient temperatures of 113 deg. F. It is designed to operate most efficiently above 25 volts. It is a compact, low-cost unit suitable for battery charging, direct current motor drives, etc. The new unit saves from 50% to 70% in space compared with similarly rated conventional silicon rectifier stacks. *Syntron Co.*

Battery Saver (RA-14)

On railroad switch lamps and similar devices powered with 2½-volt batteries, the 632-1 Battery Saver automatically turns on the lamp at night and off in daylight. A photocell controls a transistor which in turn limits the amount of current which flows through the lamp. No relays or other moving parts are used. Since no maintenance is anticipated, the entire assembly is a sealed, integral unit. It is mounted in such a manner that the ambient light falls on the photocell. When the ambient light level falls to about 1 ft-candle (dusk), the switch lamp is turned on. When ambient light level reaches 20 ft-candles, the lamp is extinguished. Units are normally intended to operate with 2½-volt air depolarized or similar batteries and with lamps drawing from 120 to 160 ma. The unit will withstand any shock and vibration normally encountered in railroad service. It will operate over an ambient temperature range of -50 deg F to + 140 deg F. There will be minor variations in the turn-on and turn-off light values at the extremes of temperature. *Railroad Accessories Corp.*

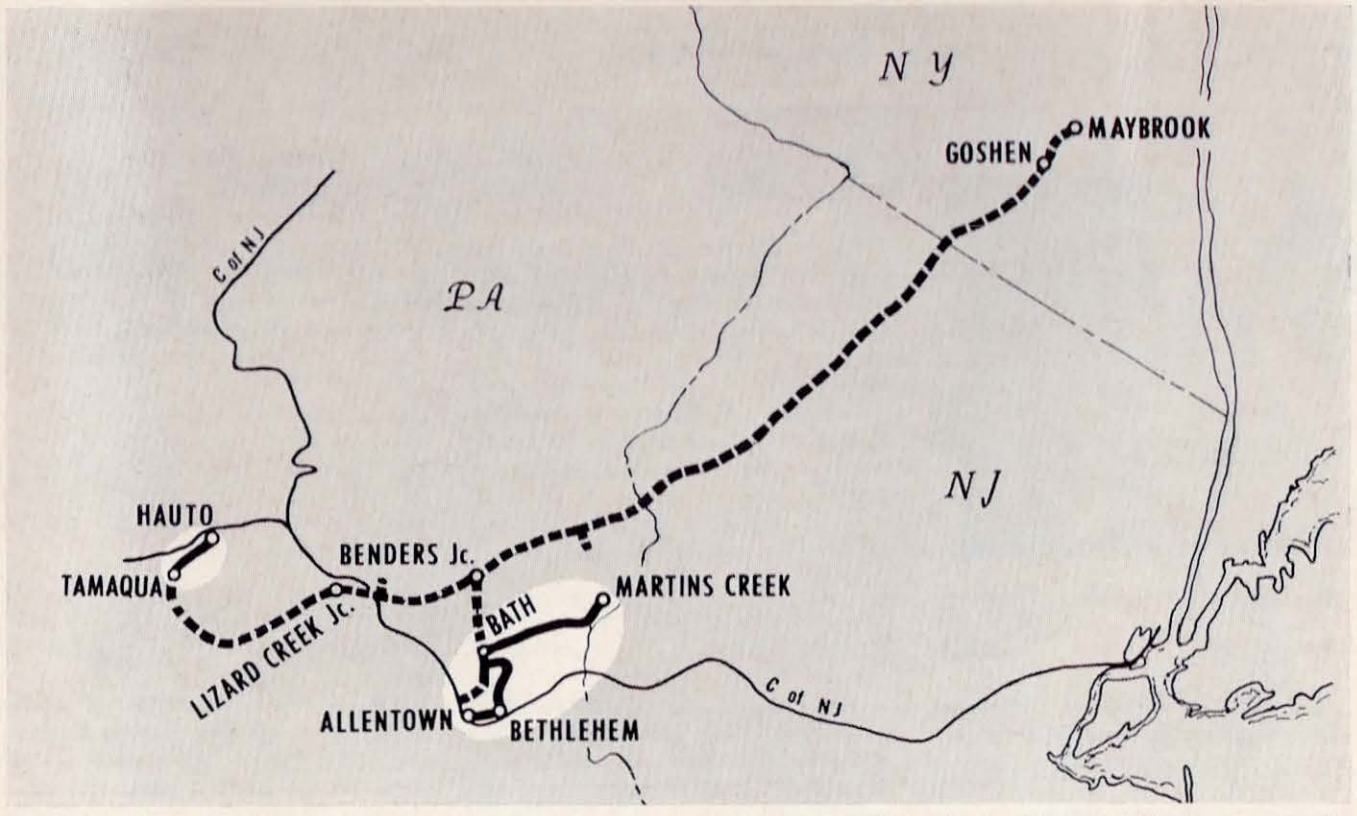
RAILWAY AGE WEEKLY

30 Church Street, N.Y. 7, N.Y. READERS' SERVICE DEPT. (Att. George Johnson)

PLEASE SEND ADDITIONAL INFORMATION RELATING TO PRODUCTS RA-1 RA-2 RA-3 RA-4 RA-5 RA-6 RA-7 RA-8 RA-9 RA-10 RA-11 RA-12 RA-13 RA-14

NAME ..... TITLE .....
COMPANY .....
ADDRESS .....
CITY ..... ZONE ..... STATE .....

10/2/61



LEHIGH & NEW ENGLAND RAILWAY will be operated over approximately 40 miles of the old Lehigh & New England RR (shown in bold lines) when the Jersey Central acquires the L&NE. Portions in broken lines will no longer be operated.

New L&NE Will Be CNJ Line

Ninety-five per cent of the originating and terminating tonnage of the Lehigh & New England Railroad is on approximately 40 miles of the L&NE's 177 miles of track. Last week, the Interstate Commerce Commission gave the L&NE permission to abandon the non-productive portion of the line and sell the rest to the Jersey Central (and, in a simultaneous order, approved a Jersey Central request for a $15-million government-guaranteed load to finance the purchase).

An abundance of transportation in the L&NE's territory and declining traffic in its main commodities brought the road to the point where it was unprofitable to keep the road intact. "So," says L&NE President S. T. W. Green, "we're selling the part where the business is to the Jersey Central, and we're shutting down the rest."

Here's the Lehigh & New England story, as Mr. Green told it, in an exclusive interview with Railway Age.

In April, 1895, a group of small roads in the Pennsylvania coal fields were consolidated to form the Lehigh & New England. In April 1960, the L&NE signed an agreement with the Central Railroad of New Jersey under which the Jersey Central would take over 40 miles of L&NE, and the rest would be abandoned.

"Like the average American," says L&NE President Severn Teackle Wallis Green, "the L&NE has reached age 65 and is ready for retirement." A strange coincidence, he adds, it that the L&NE is coming apart just about the way it went together. It was formed, in the railroad "golden-age" era, by William J. Turner, a young Philadelphia lawyer who bought up several small, bankrupt roads to form the corporation and then found the cement industry beginning a period of rapid growth all around his new line. L&NE at the turn of the century prospered as a cement road—and the portion of the L&NE that will survive is the portion in the cement producing area.

Mr. Turner's railroad, it soon became obvious, offered advantages to the Lehigh Coal & Navigation Co. as a means of getting anthracite to the New York and New England markets, and Turner exchanged all his stock in the L&NE for LC&N bonds. Lehigh Coal & Navigation, itself chartered as a railroad company, become the parent company to L&NE.

For most of its years, Mr. Green points out, the L&NE was one of the fair-haired children of the railroad industry. It had a nicely balanced business, with four main sources of revenue.

Anthracite traffic came from the LC&N mines. Cement came from the valley of the Lehigh. There were major slate-producing areas near Pen Argyl. And there was good overhead bituminous coal business to New England.

Profitable sources of revenue on the L&NE dried up gradually. The road lost the slate business first. Beginning in the 1930's, the decline in slate traffic continued till the traffic was completely gone by 1940.

The introduction of competitive fuels —oil and gas—in the New England bituminous markets dried up much of the profitable overhead traffic. Lehigh Coal & Navigation, motivated by the declining anthracite market and an unrealistic attitude by a labor force which refused to face up to the need for increased productivity, disposed of its anthracite properties. Production from this source is now only a fraction of its former volume, and although the new tenants of the coal lands have built a modern preparation plant, much of the anthracite traffic moves by truck, with

a resultant crimp in rail revenues.

Finally, a year ago, trucks appeared in the cement hauling field in large numbers. They had the effect, Mr. Green says, of reducing "the necessity for another railroad such as ours in this area to a point where it is unprofitable to try to continue." It would be possible, Mr. Green adds, to continue operating the railroad on a break-even basis for several years, "but who wants to continue an investment of $15 million on a break-even basis?"

"What we did," Mr. Green says, "was to sell to the Jersey Central about six miles of track in the mining territory with their connection at Hauto, Pa. Inasmuch as the slate was completely gone, and overhead tonnage could move over the Jersey Central as well as over the L&NE, only cement (plus a relatively small volume of anthracite) was left. So we sold them also the 34 miles in the cement area, along with the other six. Ninety-five per cent of L&NE's originating and terminating tonnage is on the forty miles they bought.

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(*Dollar figures are stated in thousands: i.e., with last three digits omitted*)
MONTH OF JULY AND SEVEN MONTHS OF CALENDAR YEAR 1961

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You Ought To Know...

New ICC approach to regulatory interpretations is hoped for and expected by one of the Commission's new members — Commissioner Tucker. He says that Commission plans to delegate more matters to its staff should permit it to get away from the case-by-case approach and go in for more ex parte proceedings "to promulgate regulatory interpretations and guide lines in advance of actual cases or controversies." As Mr. Tucker notes, Chairman Magnuson of the Senate Commerce Committee has called for that approach and the commissioner believes the Commission is moving toward greater use of it.

Sante Fe, Western Pacific, Southern Pacific, Union Pacific and Northwestern Pacific have petitioned the California Public Utilities Commission for a five per cent increase in intrastate coach fares in California. The five roads claim losses totaling $15 million from their passenger operations in 1960.

If war should come, AAR Vice President Wayne Irwin warned the annual meeting of the American Association of Railroad Ticket Agents in Washington, "railroads literally could mean the difference between victory and defeat." He said that, in all the defense measures being taken for the country, the government has done nothing to insure the readiness of the railroads.

Legislation approving building of a 438-mile rail line into the Pine Point lead and zinc mining area of northwestern Canada has received its second reading—approval in principal — in Canada's Parliament. The bill includes authorization of approximately $86,500,000 to the Canadian National to acquire the land and build the railway. Construction is expected to be completed in 1966.

A new solid-state Univac computer has been delivered to the Maine Central to replace an earlier model in the road's accounting department.

"Railroads must make a new sales effort to the shippers of America," W. W. Kramer, traffic vice president of the Milwaukee, said in Chicago last week. Speaking at the RSMA freight sales seminar, Mr. Kramer said many traffic salesmen "are lacking in adequate information" to answer shippers' questions on-the-spot. One key to more effective selling, he said, is to get complete and useable information into the hands of the men making the sales calls.

Ten thousand MR-2 prestressed concrete ties have been ordered by the Ideal Cement Co. from American Concrete Crosstie Corp., Tampa, Fla., according to the latter company. The ties will be installed in a track connecting with the Atlantic Coast Line near Wilmington, N.C. Six thousand of them will be placed on 30-in centers under 85-lb rail, and 4,000 will be on 36-in. centers under 100-lb rail. Ideal Cement had previously purchased 250 MR-2 ties for installation at Tampa.

Crossing accident probe launched by the ICC last February has been broadened by the Commission to include all collisions between trains and trucks, regardless of the commodities being moved by the trucks. The inquiry had previously been limited to grade-crossing accidents involving trucks carrying petroleum products and similar dangerous liquids. The broadening order also severs the investigation, which is No. 33440, from the No. 3666 inquiry into transportation of explosives and other dangerous articles by private carriers.

Daniel P. Loomis, president of the AAR, will address the Oct. 5 luncheon of the silver anniversary meeting of the National Association of Shippers Advisory Boards, to be held at Buffalo, N.Y., Oct. 3-5. Program for the three-day meeting follows, generally, the format of prior years.

A strike against the Rutland was begun last week by the road's operating employees. Involved are union demands for a 15-cent-an-hour pay increase and restoration of all trains and crews furloughed since 1959, according to a Rutland spokesman.

TRANSPORT TRENDS

AIRLINES: American Airlines has filed a simplified freight tariff with the Civil Aeronautics Board that, if approved, will provide a single rate for a large list of commodities. The simplified freight tariff will go into effect Oct. 23 if CAB approval is forthcoming. Under the new tariff, almost any products will be carried at the same rate between two specific cities. Another airline, Flying Tiger, has also filed a rate innovation—in its case, a tariff based on commodity density. . . . Presidents of the country's 13 major air carriers, the five members of the CAB, and their assistants talked over the problems of the airlines at a closed meeting in Washington last week. On the agenda: financing, routes, fares, cargo, promotional activities, and competition.

WATERWAYS: Congress has passed and sent to the White House a bill legalizing dual schedules of freight rates for ocean carriers. The measure permits lower rates for shippers who agree to give the ship lines all, or a fixed percentage of their business. . . . St. Lawrence Seaway officials predict a 10-to-15% traffic gain will be chalked up this season over last.

HIGHWAYS: The Interstate Commerce Commission has prescribed rules to prohibit racial discrimination in interstate bus transportation. The rules generally prohibit motor carriers of passengers from operating buses in interstate commerce on which seating is based on race, color, creed or national origin. The regulations also prohibit interstate buses from using segregated terminal facilities.

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REVENUES AND EXPENSES OF RAILWAYS

(Dollar figures are stated in thousands: i.e., with last three digits omitted)

MONTH OF JULY AND SEVEN MONTHS OF CALENDAR YEAR 1961

Name of Road		Average mileage operated during period	Operating Revenues: Freight	Pass.	Total (inc. misc.) 1961	Total (inc. misc.) 1960	Operating Expenses: Maint. Way and Structures: Total 1961	Total 1960	Deprec and Retirements	Maint. Equipment: Total 1961	Total 1960	Deprec. and Retirements	Traffic	Transportation	Total 1961	Total 1960	Operating ratio 1961	Operating ratio 1960	Net from railway operation	Railway tax accruals	Net Railway operating income 1961	Net Railway operating income 1960
Akron, Canton & Youngstown	July	171	478	....	490	443	56	52	6	70	79	16	45	160	376	385	76.7	86.9	114	61	23	8
	7 mos.	171	3,047	....	3,117	3,487	351	403	40	524	546	112	300	1,062	2,558	2,711	82.1	77.8	559	348	120	243
Alabama, Tennessee & Northern	July	214	262	....	267	213	49	55	6	9	9	6	4	74	140	151	52.5	71.1	127	45	34	—1
	7 mos.	214	1,550	....	1,578	1,646	342	380	50	86	97	40	32	566	1,053	1,151	66.7	70.0	525	120	45	44
Atchison, Topeka & Santa Fe	July	12,996	47,212	4,550	56,703	54,292	7,383	7,351	906	10,268	10,473	2,708	1,505	19,323	41,056	41,440	72.4	76.3	15,646	7,585	6,150	4,792
	7 mos.	13,002	294,544	23,495	351,308	364,785	44,889	46,499	5,791	69,229	74,660	18,678	10,153	127,567	268,589	281,186	76.5	77.1	82,719	48,670	27,295	28,068
Atlanta & St. Andrews Bay	July	81	276	....	281	245	19	27	4	23	30	8	7	71	143	153	50.9	62.5	138	59	36	19
	7 mos	81	2,015	....	2,074	2,152	196	239	24	188	200	56	50	515	1,121	1,174	54.0	54.6	953	414	253	281
Atlanta & West Point	July	93	232	24	301	292	35	37	8	51	46	15	18	126	248	255	82.3	87.3	55	16	7	—2
	7 mos.	93	1,577	140	2,043	2,152	232	287	59	337	351	105	131	865	1,715	1,824	83.9	84.8	328	111	12	23
Western Ry. of Alabama	July	133	241	23	297	303	41	38	12	60	56	20	20	136	274	275	92.4	90.6	22	24	—9	2
	7 mos.	133	1,859	131	2,241	2,334	296	317	83	391	418	137	148	949	1,937	2,011	86.4	86.2	304	166	86	57
Atlantic Coast Line	July	5,579	9,518	1,194	11,621	11,899	1,412	1,727	189	2,297	2,313	708	501	5,021	10,042	10,507	86.4	88.3	1,579	850	294	173
	7 mos.	5,572	77,774	9,405	94,482	99,481	10,801	13,533	1,210	17,184	17,729	4,877	3,685	37,651	75,058	78,792	79.4	79.2	19,423	9,300	5,415	6,100
Baltimore & Ohio	July	5,901	25,158	1,302	28,840	29,665	4,080	3,452	553	5,758	5,946	1,052	846	13,470	25,910	26,809	89.8	90.4	2,930	2,304	—2,676	—2,011
	7 mos.	5,909	166,915	8,794	192,248	230,868	25,650	25,354	3,384	37,265	45,850	7,217	5,765	91,410	172,533	193,094	89.7	83.6	19,715	15,650	—15,621	6,042
Staten Island Rapid Transit	July	29	147	90	241	230	58	52	16	36	40	2	2	156	281	274	116.4	119.0	—40	52	—117	—114
	7 mos.	29	1,125	661	1,847	1,848	408	399	91	292	322	10	14	1,095	2,014	2,023	109.0	109.5	—167	363	—711	—658
Bangor & Aroostook	July	595	654	20	734	694	166	143	21	290	270	109	28	286	840	822	114.5	118.5	—106	96	100	104
	7 mos.	595	8,173	129	8,670	8,970	1,895	2,239	142	2,062	1,926	764	203	2,620	7,369	7,628	85.0	85.0	1,300	992	1,076	1,427
Bessemer & Lake Erie	July	203	1,459	....	1,527	2,268	279	350	15	340	627	100	34	363	1,169	1,668	76.5	73.5	358	497	339	353
	7 mos.	203	7,154	....	7,526	14,939	1,175	1,813	202	3,395	4,198	717	242	2,424	8,333	10,932	110.7	73.2	—807	1,447	737	2,735
Boston & Maine	July	1,554	4,180	459	5,009	4,937	499	578	141	666	803	233	119	2,394	3,933	4,232	78.5	85.7	1,075	428	192	—242
	7 mos.	1,554	32,801	3,092	38,604	40,835	4,013	4,596	965	5,411	6,027	1,649	893	17,552	29,863	31,549	77.4	77.3	8,741	2,912	997	2,204
C P R Lines in Maine	July	234	301	51	370	370	88	102	20	69	48	18	17	149	353	342	95.6	92.6	16	32	—75	—145
	7 mos.	234	4,921	255	5,349	5,358	643	662	141	699	715	127	121	1,228	2,888	3,071	54.0	57.3	2,461	227	1,633	1,414
Carolina & Northwestern	July	284	206	....	213	194	41	45	8	33	31	21	5	75	166	166	77.8	85.7	47	16	—16	—12
	7 mos.	284	1,679	....	1,713	1,799	276	225	53	228	197	147	36	528	1,158	1,106	67.6	61.5	555	115	137	238
Central of Georgia	July	1,745	2,757	132	3,072	3,056	512	503	54	589	697	164	172	1,440	2,928	2,984	95.3	97.7	144	278	—137	—169
	7 mos.	1,745	21,613	839	23,876	24,881	3,529	3,893	323	4,078	5,206	1,103	1,212	10,415	20,670	21,885	86.6	88.0	3,206	1,884	937	1,024
Central of New Jersey	July	592	2,964	484	3,962	3,708	485	452	97	718	340	167	75	2,095	3,586	3,217	90.5	86.8	375	494	—494	—384
	7 mos.	592	21,987	3,240	28,477	29,814	3,363	3,372	678	4,836	4,615	1,135	536	15,068	25,280	25,059	88.8	84.1	3,197	3,438	—3,351	—1,219
Central Vermont	July	375	686	48	794	835	229	243	18	86	93	9	21	348	715	742	90.1	88.9	79	56	—86	—97
	7 mos.	375	4,586	300	5,369	5,710	1,320	1,284	123	727	798	64	143	2,355	4,758	4,842	88.6	84.8	611	373	—509	—283
Chesapeake & Ohio	July	5,154	21,399	516	23,595	25,878	2,900	3,000	582	5,126	5,271	1,927	818	10,174	20,751	21,270	87.9	82.2	2,845	662	2,381	2,922
	7 mos.	5,100	157,126	3,322	169,558	202,432	20,400	23,300	3,771	36,405	36,865	13,680	5,950	71,159	145,882	151,857	86.0	75.0	23,676	8,676	16,947	28,557
Chicago & Eastern Illinois	July	862	2,382	215	2,857	2,903	311	408	31	525	518	174	108	1,256	2,378	2,432	83.2	83.8	479	237	79	—67
	7 mos.	862	16,130	1,137	19,091	20,388	2,198	2,591	215	3,329	3,751	1,239	834	8,076	15,688	16,893	82.2	82.9	3,403	1,616	413	577
Chicago & Illinois Midland	July	121	504	....	538	486	49	60	8	112	108	24	30	154	394	393	73.4	80.8	143	76	34	23
	7 mos.	121	4,341	....	4,454	4,234	369	321	53	899	754	171	213	1,125	2,952	2,704	66.3	63.9	1,502	802	541	571
Chicago & North Western	July	10,709	17,619	1,555	20,149	19,939	2,714	3,221	420	3,064	3,156	1,178	571	7,443	14,772	16,209	73.3	81.3	5,377	1,355	2,512	914
	7 mos.	10,726	108,476	9,184	123,921	130,245	19,352	21,017	2,864	20,971	22,764	8,150	4,447	51,004	103,141	112,130	83.2	86.1	20,780	9,734	3,788	572
Chicago, Burlington & Quincy	July	8,626	17,404	2,129	21,697	21,379	3,587	3,123	403	3,784	4,193	1,164	666	8,702	17,826	17,963	82.2	84.0	3,871	2,233	1,289	1,341
	7 mos.	8,638	117,372	11,715	144,726	141,711	19,686	18,982	3,417	25,502	27,061	7,374	4,549	58,479	115,605	116,589	79.9	82.3	29,121	16,354	9,982	9,295
Chicago Great Western	July	14,69	2,465	9	2,662	2,730	386	366	53	413	430	135	122	990	2,000	2,014	75.1	73.7	662	255	163	180
	7 mos.	1,469	16,273	51	17,670	19,048	2,350	2,418	319	2,983	2,963	938	863	6,734	13,568	13,648	76.8	71.7	4,102	1,517	900	1,504
Chicago, Milw., St. Paul & Pac	July	10,558	14,613	1,378	18,067	18,796	2,407	3,019	431	2,511	3,128	891	536	7,461	14,203	15,948	78.6	84.8	3,863	1,651	1,117	94
	7 mos.	10,570	101,459	7,470	122,763	129,682	17,395	20,468	3,180	20,689	23,301	6,277	3,748	50,733	101,510	110,533	82.7	85.2	21,253	11,472	3,264	1,069
Chicago, Rock Island & Pacific	July	7,850	15,125	1,473	18,405	19,668	2,488	2,743	227	2,930	3,139	672	486	7,180	14,050	15,410	76.3	78.4	4,355	1,683	891	928
	7 mos.	7,850	101,114	9,111	122,454	128,429	15,046	16,966	1,735	20,065	21,483	4,615	3,543	49,333	94,794	101,000	77.4	78.6	27,659	11,241	5,582	5,659
Clinchfield	July	306	1,467	....	1,475	1,391	151	149	22	257	253	103	63	423	957	946	64.9	68.0	518	199	394	298
	7 mos.	300	11,470	....	11,530	11,732	1,233	1,321	156	1,957	2,349	737	473	3,044	7,183	7,704	62.3	65.7	4,347	1,399	3,557	3,471
Colorado & Southern	July	712	1,192	98	1,448	1,286	198	173	31	271	198	81	35	609	1,187	1,039	82.0	80.8	261	153	98	90
	7 mos.	712	7,337	439	8,824	9,071	1,210	1,156	200	1,714	1,483	568	242	3,907	7,626	7,160	86.4	78.9	1,198	700	372	751
Ft. Worth & Denver	July	1,039	1,815	185	2,272	2,499	274	294	30	233	297	45	68	914	1,615	1,704	71.1	68.2	658	263	141	180
	7 mos.	1,039	11,756	906	14,280	14,498	1,661	1,643	233	1,921	1,754	311	481	5,995	10,974	10,676	76.8	73.6	3,306	994	492	794
Colorado & Wyoming	July	39	151	....	299	199	11	19	2	31	32	12	2	120	180	173	60.1	86.9	120	74	40	1
	7 mos.	39	1,205	....	2,094	2,468	115	156	14	221	216	87	13	765	1,210	1,447	57.8	58.6	883	551	314	357
Delaware & Hudson	July	763	2,804	149	3,042	3,001	440	498	103	681	657	199	103	1,302	2,770	2,857	91.0	95.2	273	358	—97	—164
	7 mos.	763	22,220	815	23,704	26,174	2,637	2,944	509	4,757	5,823	1,385	737	9,335	19,232	21,247	81.1	81.2	4,472	2,579	1,035	2,754
Denver & Rio Grande Western	July	2,128	5,536	332	6,062	5,958	673	776	105	951	955	330	229	2,099	4,302	4,448	71.0	74.7	1,760	978	665	593
	7 mos.	2,128	39,231	1,592	42,182	44,208	4,526	5,197	704	6,705	6,815	2,346	1,638	13,696	28,834	30,108	68.4	68.1	13,348	7,748	5,505	5,901
Detroit & Toledo Shore Line	July	50	396	....	399	489	44	57	4	62	63	24	20	162	303	368	75.9	75.3	96	41	12	11
	7 mos.	50	3,352	....	3,491	4,273	329	398	27	448	523	169	143	1,349	2,386	2,812	68.3	65.8	1,105	456	187	232
Detroit, Toledo & Ironton	July	465	1,341	....	1,422	1,424	175	229	19	364	428	160	55	462	1,149	1,259	80.8	88.4	273	120	161	92
	7 mos.	475	9,555	....	9,939	12,480	1,407	1,735	260	2,367	3,019	1,094	404	3,301	8,153	9,351	82.0	74.9	1,786	812	1,319	2,260
Duluth, Miss. & Iron Range	July	557	4,287	1	5,043	7,065	421	585	115	554	571	204	12	1,246	2,528	3,164	50.1	44.8	2,515	382	2,140	1,619
	7 mos.	569	12,410	2	14,384	28,197	2,985	3,550	727	3,729	4,762	1,427	91	5,672	14,475	18,878	100.6	67.0	—91	1,502	—1,753	3,468
Duluth, Winnipeg & Pacific	July	175	405	....	407	419	89	222	5	47	51	1	8	174	333	467	81.9	111.6	74	41	—40	—179
	7 mos.	175	3,040	4	3,056	3,271	597	766	34	386	397	8	56	1,222	2,356	2,559	77.0	78.2	700	290	—167	—158

(Dollar figures are stated in thousands: i.e., with last three digits omitted)

MONTH OF JULY AND SEVEN MONTHS OF CALENDAR YEAR 1961

Name of Road		Average mileage operated during period	Operating Revenues: Freight	Pass.	Total (inc. misc.) 1961	1960	Operating Expenses: Maint. Way and Structures: Total 1961	Total 1960	Deprec and Retirements	Maint. Equipment: Total 1961	Total 1960	Deprec. and Retirements	Traffic	Transportation	Total 1961	Total 1960	Operating ratio: 1961	1960	Net from railway operation	Railway tax accruals	Net Railway operating income: 1961	1960
Elgin, Joliet & Eastern	July	205	2,654	....	3,654	3,317	312	372	30	610	849	126	46	1,388	2,679	2,988	73.3	90.1	975	573	279	—25
	7 mos.	205	17,829	....	23,475	31,705	2,018	2,478	204	4,112	6,218	900	328	9,225	17,955	23,821	76.5	75.1	5,521	3,310	1,468	1,552
Erie-Lackawanna	July	3,077	13,494	1,308	16,524	15,984	1,638	2,197	415	3,100	2,985	893	492	9,196	15,510	15,920	93.9	99.6	1,014	1,774	—2,061	—3,001
	7 mos.	3,077	96,961	9,283	118,803	130,999	13,199	14,096	2,818	23,079	22,859	6,260	3,644	64,005	111,785	113,660	94.1	86.8	7,018	12,774	—14,418	—3,294
Florida East Coast	July	572	1,331	328	1,864	1,845	209	201	59	318	327	116	68	788	1,556	1,654	83.4	89.6	309	97	32	—177
	7 mos.	572	12,839	3,092	17,780	19,531	2,037	2,519	311	3,109	3,530	809	498	7,257	14,226	15,393	80.0	78.8	3,554	1,815	224	1,013
Georgia Railroad	July	321	484	19	582	595	79	76	9	105	107	34	39	283	534	547	91.7	91.9	48	37	8	16
	7 mos.	321	3,438	96	4,106	4,420	570	573	60	754	787	235	279	1,951	3,819	3,945	93.0	89.2	286	268	....	284
Georgia & Florida	July	321	259	....	265	260	88	108	3	49	40	10	22	93	272	276	102.6	106.0	—7	20	—47	—53
	7 mos.	321	1,975	....	2,009	1,921	580	801	24	339	290	71	159	671	1,895	2,004	94.3	104.3	114	138	—196	—352
Grand Trunk Western	July	946	3,095	214	3,638	4,300	597	758	59	724	617	76	106	2,019	3,686	3,994	101.3	92.9	—48	373	—920	—647
	7 mos.	946	23,779	1,328	27,302	33,735	4,281	4,922	410	5,110	5,792	534	708	14,154	25,974	28,930	95.1	85.8	1,328	2,657	—4,359	—1,358
Great Northern	July	8,276	17,302	1,206	20,124	20,235	3,533	3,874	442	3,619	4,128	940	468	7,553	16,241	17,229	80.7	85.1	3,883	1,925	1,624	847
	7 mos.	8,277	111,661	5,569	126,384	137,485	22,261	22,596	2,405	25,448	27,036	6,536	3,709	50,226	108,707	112,132	86.0	81.6	17,676	13,012	2,792	7,989
Green Bay & Western	July	219	331	....	346	342	57	61	5	47	41	9	29	117	272	269	78.8	78.8	73	42	—4	3
	7 mos.	219	2,451	....	2,536	2,556	285	377	34	367	334	64	190	818	1,829	1,914	72.1	74.9	707	356	120	85
Gulf, Mobile & Ohio	July	2,745	5,575	268	6,289	6,147	782	783	90	1,251	1,251	293	256	2,196	4,769	4,934	75.8	80.3	1,520	669	371	276
	7 mos.	2,745	39,835	1,657	44,593	45,104	5,313	6,111	559	8,757	9,322	2,052	1,819	15,627	33,751	35,909	75.7	79.6	10,842	4,737	2,801	2,396
Illinois Central	July	6,466	16,482	1,990	20,599	20,058	3,022	3,204	367	3,380	3,541	924	609	8,351	16,388	16,919	79.6	84.4	4,211	2,093	1,433	707
	7 mos.	6,485	114,650	12,407	142,289	150,758	19,672	22,631	2,958	24,739	29,348	6,396	4,460	58,344	114,619	124,283	80.6	82.4	27,670	14,925	8,280	6,421
Illinois Terminal	July	335	651	....	727	762	80	75	3	103	139	26	39	305	578	658	79.5	86.3	149	62	15	—22
	7 mos.	335	4,302	....	4,829	5,413	564	551	19	830	1,012	185	284	2,073	4,123	4,524	85.4	83.6	705	311	—79	28
Kansas City Southern	July	894	3,051	83	3,540	3,624	253	249	50	444	522	113	94	1,203	2,113	2,224	59.7	61.4	1,427	547	588	611
	7 mos	894	20,937	460	23,931	25,810	1,727	1,956	350	3,050	3,548	790	653	8,007	14,283	15,390	59.7	59.6	9,648	3,731	3,862	4,264
Kansas, Oklahoma & Gulf	July	328	391	....	392	450	45	34	7	30	37	12	32	105	240	256	61.3	56.8	152	76	40	55
	7 mos.	328	2,968	....	2,977	2,983	309	259	67	241	275	86	228	729	1,716	1,747	57.7	58.6	1,261	558	377	347
Lake Superior & Ishpeming	July	160	563	....	694	772	62	65	12	69	81	36	2	145	295	319	42.5	41.3	398	235	175	247
	7 mos.	160	1,753	....	2,155	3,041	348	416	86	482	534	249	16	593	1,534	1,869	71.2	61.5	621	372	323	518
Lehigh & Hudson River	July	98	258	....	259	251	26	26	2	33	29	8	15	109	201	190	77.6	75.5	58	23	2	6
	7 mos.	98	1,901	....	1,907	1,824	196	180	17	235	213	58	111	774	1,434	1,383	75.2	75.8	473	159	12	31
Lehigh & New England	July	177	213	....	216	304	34	53	7	102	197	37	6	121	303	478	140.6	157.0	—87	23	—39	—137
	7 mos.	177	1,311	....	1,336	2,335	182	315	56	763	1,253	260	46	867	2,146	3,151	160.6	134.9	—810	167	—516	—455
Lehigh Valley	July	1,114	3,283	—2	3,408	3,532	402	512	98	586	751	188	128	1,984	3,315	3,838	97.3	108.7	93	419	—585	—957
	7 mos.	1,116	23,952	110	25,095	30,660	3,443	4,178	681	4,760	5,492	1,292	905	14,081	24,717	28,182	98.5	91.9	379	2,963	—4,800	—2,330
Long Island	July	344	763	5,004	5,938	1,749	747	451	91	1,068	560	168	42	3,063	5,191	2,432	87.4	139.0	747	356	299	—1,199
	7 mos.	344	5,690	33,812	40,621	36,990	5,792	5,602	707	7,907	7,233	1,177	299	21,204	36,963	33,745	91.0	91.2	3,659	2,775	—313	—1,025
Louisiana & Arkansas	July	746	1,770	51	1,930	1,896	162	209	20	260	298	97	77	682	1,252	1,332	64.9	70.2	678	359	171	159
	7 mos.	746	12,116	283	13,149	14,680	1,161	1,460	145	1,934	2,187	682	535	4,730	8,877	9,510	67.5	64.8	4,272	2,222	1,182	1,767
Louisville & Nashville	July	5,684	15,049	854	17,207	16,078	1,700	1,800	317	2,964	3,700	1,299	526	7,487	13,363	14,696	77.7	91.4	3,844	2,186	1,466	655
	7 mos.	5,684	113,103	4,630	127,062	132,778	14,367	15,300	2,234	23,358	29,040	8,751	3,710	52,754	100,758	107,541	79.3	81.0	26,304	15,914	9,745	9,477
Maine Central	July	937	1,507	1	1,627	1,699	331	358	23	280	299	78	24	659	1,402	1,467	86.2	86.3	224	78	102	104
	7 mos.	937	13,013	3	13,852	14,685	2,377	2,452	193	2,603	2,619	540	199	5,093	11,079	11,245	80.0	76.6	2,773	1,215	824	1,220
Minn., Northfield & Southern	July	77	255	....	272	305	38	24	3	34	39	13	36	79	222	221	81.7	72.7	50	35	10	25
	7 mos.	77	1,846	....	1,972	2,181	223	156	20	251	295	90	244	558	1,537	1,564	77.9	71.7	435	289	114	193
Missouri-Illinois	July	172	381	....	385	358	24	38	4	88	105	40	14	125	266	294	69.2	82.1	119	97	72	30
	7 mos.	172	2,839	....	2,864	3,150	281	277	34	625	645	280	100	872	1,982	2,036	69.2	64.6	882	771	382	497
M-K-T Lines	July	2,885	4,224	69	4,672	5,175	566	574	107	836	1,158	259	169	1,752	3,516	3,951	75.3	76.3	1,156	332	220	287
	7 mos.	2,886	29,835	453	32,998	33,490	3,833	3,694	692	5,961	6,720	1,815	1,178	12,277	24,670	25,244	74.8	75.4	8,328	2,384	1,678	2,227
Missouri Pacific	July	9,361	21,456	1,200	25,139	26,621	3,123	4,029	354	3,822	4,457	1,169	614	9,546	18,091	20,409	72.0	76.7	7,048	2,642	2,907	2,842
	7 mos.	9,361	146,040	6,194	169,202	175,631	19,858	23,946	2,326	27,444	30,405	8,204	4,711	64,904	124,206	133,815	73.4	76.2	44,996	15,719	18,641	19,130
Monon	July	541	1,402	28	1,515	1,613	178	244	23	256	256	76	102	586	1,213	1,322	80.1	81.9	302	113	70	42
	7 mos.	541	8,947	185	9,736	10,969	1,359	1,637	193	1,949	1,930	532	742	4,291	9,069	9,539	93.1	86.9	667	780	—662	—47
Monongahela	July	177	325	....	328	445	73	69	11	40	46	11	1	110	233	243	71.2	54.5	94	36	19	128
	7 mos.	177	3,541	....	3,560	3,995	516	507	87	328	364	77	7	886	1,853	1,924	52.0	48.2	1,708	526	782	1,467
New York Central	July	10,245	35,330	5,288	47,765	51,212	5,821	5,511	1,079	9,065	11,250	2,389	909	24,029	42,353	46,209	88.7	90.2	5,413	4,723	—2,315	—2,885
	7 mos.	10,253	255,131	35,006	340,425	402,091	38,574	43,394	7,648	69,959	78,750	16,729	6,947	172,296	306,169	337,590	89.9	84.0	34,256	37,141	—20,768	10,973
Pittsburgh & Lake Erie	July	220	2,175	28	2,312	2,315	412	431	57	897	952	337	49	912	2,447	2,634	105.8	113.7	—135	219	638	489
	7 mos.	220	13,280	201	14,293	21,893	2,494	2,937	403	6,363	6,404	2,357	396	6,333	16,940	19,050	118.5	87.0	—2,648	1,495	2,806	6,436
New York, Chicago & St. Louis	July	2,170	10,373	95	10,939	11,647	1,162	1,417	149	1,786	1,986	457	342	4,693	8,474	9,164	77.5	78.7	2,465	1,109	764	747
	7 mos.	2,170	69,780	676	73,277	88,828	7,733	9,614	1,044	12,276	14,579	3,188	2,385	30,333	56,239	64,358	76.8	72.5	17,038	7,600	6,512	8,550
New York, New Haven & Hartford	July	1,735	4,961	3,551	9,855	10,394	1,592	1,078	338	1,903	1,941	527	211	5,405	9,920	9,436	100.7	90.8	—65	681	—1,961	—1,465
	7 mos.	1,740	38,172	24,446	72,220	79,800	11,211	9,813	1,993	14,527	13,338	3,680	1,730	38,472	72,052	70,986	99.8	89.0	168	4,901	—14,791	—8,732
New York Connecting	July	21	290	....	312	Dr. 64	59	54	25	13	10	....	....	74	151	109	48.3	....	161	95	29	—290
	7 mos.	21	2,086	....	2,229	1,991	492	542	177	93	131	....	....	526	1,138	1,358	51.1	68.2	1,091	692	189	—199
New York, Sus. & Western	July	97	221	4	242	297	43	35	6	36	47	8	9	130	249	267	102.7	89.8	—7	31	—70	—44
	7 mos.	97	1,908	38	2,097	2,353	284	293	42	300	359	56	60	1,003	1,858	2,017	88.6	85.7	239	214	—261	—190
Norfolk & Western	July	2,747	17,001	266	17,949	17,206	1,724	2,104	391	2,827	2,944	1,538	399	5,099	10,966	11,328	61.1	65.8	6,983	3,628	4,342	4,040
	7 mos.	2,746	125,515	1,411	132,381	144,677	12,705	15,444	2,693	20,844	23,409	10,474	2,729	36,119	78,752	85,690	59.5	59.2	53,628	27,419	32,382	37,294
Norfolk Southern	July	593	714	....	724	676	165	165	15	117	153	41	48	268	687	705	94.9	104.3	37	55	—28	—35
	7 mos.	593	5,301	....	5,400	5,352	1,120	1,178	109	884	929	281	341	1,866	4,760	4,689	83.0	87.6	650	382	63	206

(Continued on next page)

REVENUES AND EXPENSES OF RAILWAYS

REVENUES AND EXPENSES OF RAILWAYS

(Dollar figures are stated in thousands; i.e., with last three digits omitted)

MONTH OF JULY AND SEVEN MONTHS OF CALENDAR YEAR 1961

Name of Road		Average mileage operated during period	Operating Revenues: Freight	Pass.	Total (inc. misc.) 1961	1960	Operating Expenses: Maint. Way and Structures: Total 1961	Total 1960	Deprec and Retirements	Maint. Equipment: Total 1961	Total 1960	Deprec. and Retirements	Traffic	Transportation	Total 1961	Total 1960	Operating ratio 1961	1960	Net from railway operation	Railway tax accruals	Net Railway operating income 1961	1960
Northern Pacific	July	6,795	11,701	858	13,677	14,215	2,690	2,617	300	2,760	2,536	850	388	5,775	12,592	12,419	92.1	87.4	1,085	1,481	—100	590
	7 mos.	6,800	81,157	3,850	92,309	100,324	14,935	16,140	2,311	18,860	19,625	5,949	2,883	39,734	83,236	86,484	90.2	86.2	9,074	10,092	1,323	4,536
Northwestern Pacific	July	328	912	....	918	857	172	209	18	54	83	3	7	280	540	634	58.8	73.9	379	118	42	—39
	7 mos.	328	6,285	4	6,322	6,943	1,102	1,401	133	405	522	18	48	1,790	3,545	4,278	56.1	61.6	2,777	964	393	174
Pacific Electric	July	336	1,029	....	1,168	1,092	171	190	24	39	48	4	21	541	861	876	73.7	80.2	307	237	—150	—95
	7 mos.	335	7,544	....	8,533	7,924	1,144	1,276	176	326	271	25	144	3,636	5,965	6,054	69.9	76.4	2,568	1,097	81	—356
Pennsylvania	July	9,835	51,162	8,016	67,035	69,911	6,613	6,915	1,470	12,247	12,371	3,067	1,106	31,236	55,291	57,593	82.5	82.4	11,744	5,381	1,481	47
	7 mos.	9,856	338,143	59,709	454,964	531,763	45,912	53,785	10,369	88,290	100,852	21,346	7,725	218,202	389,205	432,970	85.5	81.4	65,759	40,092	—10,883	13,304
Penn.-Reading Seashore Lines	July	338	503	100	624	656	145	170	25	101	143	26	7	464	783	876	125.5	133.5	—159	70	—411	—470
	7 mos.	338	3,242	415	3,782	4,537	1,049	1,220	181	803	880	179	42	3,225	5,601	5,922	148.1	130.5	—1,819	494	—3,442	—3,122
Piedmont & Northern	July	126	391	....	400	419	46	43	5	35	36	10	35	101	260	246	65.1	58.6	140	75	20	41
	7 mos.	126	3,067	....	3,152	3,344	342	330	38	244	265	67	235	678	1,795	1,751	57.0	52.4	1,356	691	307	437
Pittsburgh & West Virginia	July	132	545	....	546	609	129	145	25	108	127	40	49	175	509	605	93.3	99.3	37	38	—11	11
	7 mos.	132	3,416	....	3,432	5,043	831	1,042	175	850	1,050	296	372	1,261	3,708	4,463	108.1	88.5	—277	286	—660	359
Quanah, Acme & Pacific	July	120	238	....	239	244	20	22	2	20	13	....	13	62	137	139	57.4	56.9	102	35	36	35
	7 mos.	120	1,809	....	1,823	1,990	134	136	11	121	93	2	142	396	932	913	51.2	45.9	890	197	436	510
Reading	July	1,294	6,289	421	7,254	7,201	1,104	1,091	182	1,455	1,473	414	170	3,704	6,906	6,861	95.2	95.3	348	600	—658	477
	7 mos.	1,295	46,608	3,495	54,640	62,430	7,932	7,605	1,369	11,695	11,947	3,136	1,247	26,426	50,832	51,790	93.0	83.0	3,808	4,523	—4,698	4,278
Richmond, Fred. & Potomac	July	118	1,148	469	1,906	1,903	136	157	29	298	285	67	27	685	1,289	1,281	67.6	67.3	618	373	156	139
	7 mos.	118	8,637	2,948	13,736	14,776	1,058	1,194	201	2,064	2,046	471	196	5,006	9,398	9,298	68.4	62.9	4,338	2,546	956	1,583
Rutland	July	391	245	....	258	300	76	70	11	51	53	18	24	117	291	328	112.7	109.5	—33	27	—50	—71
	7 mos.	391	2,072	....	2,212	2,469	508	530	60	398	421	127	174	847	2,089	2,411	94.5	97.6	123	184	—59	—180
St. Louis-San Francisco	July	4,546	8,724	223	9,676	9,731	1,404	1,615	173	1,589	1,594	610	345	3,924	7,843	8,252	81.1	84.8	1,831	698	954	827
	7 mos.	4,546	59,593	1,156	65,867	70,032	9,046	10,958	1,272	10,752	11,556	4,271	2,545	26,820	53,442	57,126	81.1	81.6	12,425	4,812	5,896	6,498
St. Louis, S. F. & Texas	July	143	339	....	358	340	35	29	4	20	27	1	24	147	239	237	66.6	69.7	120	36	15	10
	7 mos.	143	3,044	....	3,167	3,089	318	226	29	158	192	9	157	1,011	1,732	1,695	54.7	54.9	1,435	547	429	532
St. Louis Southwestern Lines	July	1,554	5,039	....	5,112	4,766	527	577	90	651	707	245	185	1,814	3,355	3,359	65.6	70.5	1,757	912	777	701
	7 mos.	1,554	36,859	Dr. 1	37,348	39,019	3,713	4,046	598	4,543	4,914	1,610	1,293	12,701	23,513	23,968	63.0	61.4	13,834	6,642	5,752	6,703
Savannah & Atlanta	July	144	353	....	367	383	44	45	2	64	71	19	16	120	257	266	70.0	69.5	110	57	36	46
	7 mos.	144	2,492	....	2,590	2,545	412	363	14	478	482	135	118	842	1,944	1,872	75.1	73.6	645	339	203	271
Seaboard Air Line	July	4,135	9,800	1,316	12,100	12,012	1,422	1,663	222	2,322	2,595	746	486	4,690	9,599	10,229	79.3	85.2	2,501	1,252	1,003	931
	7 mos.	4,135	74,798	8,550	90,972	95,792	11,808	12,237	1,525	17,660	18,070	5,284	3,442	34,259	71,990	73,281	79.1	76.5	18,982	8,731	7,593	10,384
Soo Line	July	4,716	5,268	179	5,842	6,605	986	1,090	101	999	1,146	282	223	2,658	5,270	5,681	90.2	86.0	571	506	276	32
	7 mos.	4,716	39,468	526	42,385	45,171	5,662	6,891	756	7,653	8,125	1,959	1,596	18,081	35,791	38,775	84.4	85.8	6,595	3,421	1,229	1,161
Southern Railway	July	6,267	16,878	1,012	19,424	18,926	2,536	2,582	407	3,982	3,808	1,046	531	6,909	15,066	14,940	77.6	78.9	4,358	1,942	1,969	2,094
	7 mos.	6,276	128,278	5,918	145,809	151,924	18,839	19,399	2,882	27,117	26,973	7,381	3,748	48,789	107,413	107,932	73.7	71.0	38,396	16,515	15,949	19,461
Alabama Great Southern	July	327	1,045	64	1,251	1,168	211	237	37	310	272	84	42	468	1,122	1,128	89.7	96.6	129	88	17	—98
	7 mos.	327	7,315	309	8,660	9,354	1,677	1,866	250	2,159	2,187	586	304	3,333	8,216	8,536	94.9	91.2	445	678	—518	—253
Cinn., New Orleans & Texas Pac	July	337	2,258	111	2,591	2,605	567	523	122	790	717	270	85	819	2,425	2,333	93.6	89.6	166	270	75	311
	7 mos.	337	16,696	513	18,911	21,872	4,176	4,057	809	5,530	5,230	1,883	602	5,887	17,555	17,387	92.8	79.5	1,356	1,839	612	3,352
Georgia Southern & Florida	July	397	495	42	619	532	116	148	12	74	76	11	21	233	490	548	79.1	103.0	129	37	—38	—208
	7 mos.	397	3,817	224	4,667	5,106	907	1,166	80	483	524	75	151	1,735	3,659	4,061	78.4	79.5	1,008	254	—264	—365
New Orleans & Northeastern	July	203	689	48	813	864	135	233	24	232	223	102	27	247	707	789	87.0	91.3	106	80	75	9
	7 mos.	203	5,220	248	6,028	5,953	1,252	1,396	171	1,586	1,491	714	197	1,815	5,385	5,378	89.3	90.3	643	598	273	297
Southern Pacific	July	7,948	40,460	2,846	45,875	44,646	5,046	5,317	555	9,884	10,596	2,666	788	18,746	36,868	37,250	80.4	83.4	9,007	4,606	3,217	2,356
	7 mos.	7,951	275,929	14,732	307,979	318,225	34,122	36,579	3,575	66,683	71,306	18,475	5,305	118,027	239,833	247,568	77.9	77.8	68,146	36,561	27,711	30,303
Texas & New Orleans	July	4,098	9,292	430	10,339	10,311	1,652	1,645	234	1,930	1,589	205	270	4,347	8,827	8,248	85.4	80.0	1,512	304	—83	123
	7 mos.	4,099	68,459	2,129	75,110	77,737	10,981	12,382	1,299	12,493	11,681	1,378	1,804	29,023	58,533	58,733	77.9	75.6	16,577	5,447	1,705	3,024
Spokane International	July	150	301	....	308	255	56	51	21	18	26	9	4	74	161	166	52.3	65.1	147	25	81	10
	7 mos.	150	1,976	....	2,036	1,995	355	375	49	149	196	67	27	498	1,096	1,167	53.8	58.5	940	315	399	218
Spokane, Portland & Seattle	July	936	2,298	130	2,613	2,370	378	454	59	381	489	129	34	1,070	1,985	2,115	76.0	89.2	628	240	258	35
	7 mos.	936	15,533	588	17,414	18,759	2,872	3,001	420	2,972	3,373	903	252	7,163	14,144	14,743	81.2	78.6	3,271	1,745	752	1,563
Tennessee Central	July	284	308	....	341	285	48	46	5	48	52	21	14	117	248	251	72.8	87.9	93	24	30	—27
	7 mos.	284	2,110	1	2,333	2,414	320	324	36	413	383	149	106	848	1,842	1,838	79.0	76.2	491	169	38	88
Texas & Pacific	July	1,828	4,386	423	5,384	5,618	566	495	102	904	1,074	300	225	2,322	4,358	4,771	80.9	84.9	1,027	336	265	138
	7 mos.	1,828	32,084	2,154	38,762	43,069	3,730	4,725	678	6,520	7,469	2,097	1,563	16,650	31,023	34,099	80.0	79.2	7,739	2,609	1,996	2,187
Texas Mexican	July	161	174	....	207	267	49	36	7	37	30	12	13	92	213	194	103.1	72.8	—7	Cr. 3	—26	7
	7 mos.	161	1,528	....	1,769	2,011	326	326	45	238	236	86	90	574	1,390	1,390	78.6	69.1	379	187	36	128
Toledo, Peoria & Western	July	239	527	....	551	582	46	72	6	46	46	14	49	172	349	372	63.3	63.9	202	83	45	50
	7 mos.	239	3,767	....	3,923	4,368	391	522	48	346	348	94	345	1,186	2,538	2,734	64.7	62.6	1,385	575	307	444
Union Pacific	July	9,717	36,057	3,144	42,655	41,017	4,739	3,675	914	7,480	7,653	2,626	1,062	15,346	31,100	30,391	72.9	73.9	11,556	6,465	2,535	2,381
	7 mos.	9,724	239,544	14,875	275,964	281,367	31,410	31,772	5,709	51,796	53,708	18,182	7,841	98,308	204,922	210,470	74.3	74.8	71,042	46,145	13,234	15,113
Wabash	July	2,423	7,752	318	8,988	8,833	855	911	124	1,265	1,249	481	312	4,295	7,188	7,262	80.0	82.2	1,800	634	346	140
	7 mos.	2,423	53,628	1,936	61,853	65,227	5,646	6,588	879	8,674	9,582	3,390	2,195	28,966	48,684	52,063	78.7	79.8	13,169	4,459	3,153	2,732
Ann Arbor	July	294	667	....	697	710	66	68	7	159	146	44	20	327	594	599	85.2	84.4	103	49	42	42
	7 mos.	294	4,297	....	4,359	4,838	391	460	46	965	1,078	308	149	2,098	3,753	4,287	86.1	88.6	606	351	219	12
Western Maryland	July	841	2,765	....	2,797	2,910	373	424	58	792	830	307	111	1,155	2,599	2,809	92.9	96.5	198	210	343	301
	7 mos.	841	21,486	....	22,333	27,595	3,368	4,213	409	5,406	5,937	2,157	796	8,572	19,450	21,780	87.1	78.9	2,882	1,909	2,752	4,578
Western Pacific	July	1,188	4,068	260	4,433	4,548	479	522	80	751	714	234	226	1,677	3,462	3,521	78.1	77.4	970	473	434	537
	7 mos.	1,188	28,165	1,246	30,114	30,731	3,406	4,035	584	4,840	4,899	1,656	1,705	10,734	22,934	24,532	76.2	79.8	7,180	3,582	3,166	2,901

Market Outlook

Carloadings Rise 1.9% Above Previous Week's

Loadings of revenue freight in the week ended Sept. 23 totaled 605,842 cars, the Association of American Railroads announced on Sept. 28. This was an increase of 11,504 cars, or 1.9%, compared with the previous week; a decrease of 11,831 cars, or 1.9%, compared with the corresponding week last year; and an increase of 18,231 cars, or 3.1%, compared with the equivalent 1959 week.

Loadings of revenue freight for the week ended Sept. 16 totaled 594,338 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CARLOADINGS
For the week ended Saturday, Sept. 16

District	1961	1960	1959
Eastern	84,995	90,441	86,679
Allegheny	102,812	79,915	84,133
Pocahontas	54,917	51,290	49,280
Southern	111,442	109,630	116,134
Northwestern	93,326	99,337	68,049
Central Western	108,877	116,465	117,944
Southwestern	37,969	51,663	55,238
Total Western Districts	240,172	267,465	241 231
Total All Roads	594,338	598,741	577,457
Commodities:			
Grain and grain products	48,448	52,485	54,032
Livestock	5,634	7,530	9,041
Coal	112,433	109,321	106,647
Coke	7,799	4,953	3 294
Forest Products	38,532	40,021	41,888
Ore	55,309	51,102	8,760
Merchandise l.c.l.	29,097	34,954	42,961
Miscellaneous	297,086	298,375	310,834
Sept. 16	594,338	598,741	577,457
Sept. 9	512,726	480,065	477 616
Sept. 2	599,349	577,206	547,806
Aug. 26	592,265	594,964	548,877
Aug 19	595,154	596,464	542,486
Cumulative total, 37 weeks	19,839,408	22,030,094	22,258,101

PIGGYBACK CARLOADINGS.—U. S. piggyback loadings for the week ended Sept. 16 totaled 11,907 cars, compared with 11,505 for the corresponding 1960 week. Loadings for 1961 up to Sept. 16 totaled 406,-843 cars, compared with 390,747 for the corresponding period of 1960.

IN CANADA.—Carloadings for the seven-day period ended Sept. 14 totaled 77,118 cars, compared with 66,436 for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada		
Sept. 14, 1961	77,118	21,558
Sept. 14, 1960	78,529	23,048
Cumulative Totals		
Sept. 14, 1961	2,426,525	859,697
Sept. 14, 1960	2,593,173	993,010

New Equipment

FREIGHT-TRAIN CARS

► *Canadian National.*—Ordered 200 50-ton box cars from ACF for September delivery. Will also convert 250 end bunkers to heated box cars at company shops by mid-1962.

► *Louisville & Nashville.*—Will spend over $2,600,000 to rebuild 500 50-ton hopper cars at company shops, South Louisville, Ky. ($1,725,000); purchase 55 "jumbo" 70-ton covered hopper cars ($688,000), and install metal covers on 32 gondolas ($153,000) and bulkheads on 49 flat cars ($69,000).

► *Santa Fe.*—Will acquire 100 8-by-8-by-20-ft containers and 25 specially equipped flat cars for containerized mail handling.

► *Southern.*—Announced the award of a $4,800,000 contract to Magor Car Corp., Clifton, N.J., for the building of 200 high-capacity, aluminum, covered hopper cars, to have a volume capacity of 5,000 cu ft and a weight-carrying capacity of 100 tons. The cars will be an addition to Southern's present fleet of 1,205 high-capacity cars of aluminum construction put in service last year. Deliveries are to begin in November. (RA, Aug. 7, p. 35.)

PIGGYBACK

► *Trailer Train.*—Directors authorized the purchase of 650 new cars. Breakdown of builders on Trailer Train's last order for 600 cars (RA, Aug. 7, p. 35) is as follows: ACF, 153; Bethlehem Steel, 69; GATX, 13; Pullman-Standard, 365. Forthcoming 650 will boost Trailer Train's fleet to a total of 8,528 cars.

SPECIAL

► *St. Johnsbury & Lamoille County.*—Upgraded 24 rack cars for limestone service, 114 50-ft box cars, and seven locomotives.

► *Wabash.*—Has acquired an additional 165 tri-level auto racks from Paragon Bridge and Steel Co., Novi, Mich. Wabash now owns 298 tri-level and 50 bi-level auto racks.

► *Bad Order Ratio 0.7% Higher Than Last Year.*—Class I roads on Aug. 1 owned 1,628,281 freight cars, 44,140 less than last year, according to AAR report summarized below. Bad order ratio was 0.7% higher than on Aug. 1, 1960.

	Aug. 1, 1961	Aug. 1, 1960	Change
Car Ownership	1,628,281	1,672,421	—44,140
Waiting repairs	151,500	143,579	+ 7,921
Repair ratio	9.3%	8.6%	+ 0.7%

Maintenance Expenditures

► *Down 4.9% in July.*—Expenditures by Class I roads for maintenance of equipment, way and structures in July were down about $12 million, compared to July 1960, according to report of AAR Bureau of Railway Economics summarized below:

Maintenance of Way and Structures	$ 95,528,377	$ 99,477,458	—4.0
Maintenance of Equipment	136,040,466	144,092,698	—5.6
Totals	231,568,843	243,570,156	—4.9

Kennedy Asks Sound Benefits Systems

President Kennedy has urged Congress to take "appropriate action" in its 1962 session to restore the Railroad Retirement and Railroad Unemployment Insurance systems to "healthy financial self-sufficiency." The recommendation came in a statement issued by the President when he signed into law the recently enacted bill to liberalize the retirement system.

The liberalizer, which was sponsored by the Railway Labor Executives' Association and not opposed by the railroads, will permit railroaders who lack 30 years of service to retire at age 62.

Annuities of the 62-year-olds taking advantage of the new law will be reduced from what they would receive if they waited until they were 65. Other provisions of the liberalizer ease rules covering eligibility for spouses' annuities.

As President Kennedy pointed out in his statement, recent legislation provided similar arrangements for employees of industry generally who are covered by the Social Security Act. The President went on, however, to note that there are differences. He explained that the early retirement benefits under the Social Security Act are to be computed so that they will result in no increased costs, whereas the early retirement benefits for railroaders will add "significant additional financial burden on the system.

"In different circumstances, I would have disapproved this bill," the President also said, adding:

"The Railroad Retirement System is already in serious financial trouble. Since 1959 the actuarial deficiency of the system has risen from 0.61% of payroll on a level premium basis to 1.69% of payroll, or $73 million a year, according to the Railroad Retirement Board's Eighth Actuarial Valuation. [This bill] will add $2 million a year to this deficiency. The Railroad Retirement Insurance System is also in difficult financial straits and has in recent years borrowed more than $200 million."

Then came the President's call for Congressional action next year. Meanwhile, he said he was "instructing the Railroad Retirement Board, in consultation with representatives of the industry and of the labor organizations, to undertake a review of the problem and to develop appropriate suggestions for my consideration."

AT&SS Elects New Officers At Chicago Annual Meeting

The annual meeting of the Association of Track and Structure Suppliers was held at the Conrad Hilton Hotel, Chicago, Sept. 20. It took place on the last day of concurrent annual conventions of the Roadmasters' and Bridge and Building Associations.

President Ray T. Johnson, Jr. (Mid-West Forging & Manufacturing Co.) presided. P. J. Wolf (Maintenance Equipment Co.) was advanced from first vice president to president; H. R. Deubel (Chicago Pneumatic Tool Co.) was promoted from second vice president to first vice president; A. L. Fridley (Unit Rail Anchor Corp.) was moved up from third vice president to second vice president; C. L. Rager (Fairmont Railway Motors, Inc.), treasurer, was elected third vice president; J. L. Beven, Jr. (Remington Arms, Inc.), secretary, was advanced to treasurer; and H. R. Miller (Linde Co.), a director, was elected secretary.

Three directors were elected to serve three-year terms, as follows: G. F. Carpenter (Reade Manufacturing Co.); John R. Thompson (Railway Age); and Robert Evans (Armco Drainage & Metal Products, Inc.), who was re-elected. In addition, James Treece (Binks Manufacturing Co.) was elected a director to finish the unexpired term of Mr. Miller.

Smathers Continues Study Of 'Gray Area' Trucking

Senator Smathers' bill to combat "gray-area" trucking operations is designed to stimulate discussion of the problem during the adjournment of Congress which is expected to continue until January.

After introducing the bill, S.2560, the senator from Florida, who is chairman of the Senate's Surface Transportation Subcommittee, said he was "calling on representatives of the trucking, water carrier and railroad industries, as well as state officials and shippers, to meet

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Robert G. Lewis

PUBLISHER

with the subcommittee staff during the recess to make suggestions and offer amendments to this proposed legislation, and if need be to assist in drafting additional legislation for introduction early next year." The senator also said the subcommittee plans "an educational campaign among shippers on the dangers of employing illegal truckers," and it is also "working for stricter and more effective enforcement of laws against this illegal truck traffic."

His bill, as Senator Smathers put it, proposes a "first step." It "does not pretend to be the final solution to this problem, but it can be utilized as a starting point."

The bill would establish uniformity in state regulation of interstate motor carriers; provide that persons injured by violations of the Interstate Commerce Act could obtain injunctions against the violators; make civil forfeiture provisions of the act applicable to unlawful operations and safety violations and substantially increase the amount of the forfeiture; require registration of vehicles operating under the so-called agricultural exemption which leaves for-hire trucking of farm products free of regulation; and bring under ICC regulation freight forwarders engaged in the handling of used household goods.

Steel Foundries Expect Second-Half Upturn

The nation's steel foundries expect shipments to increase during the last half of 1961. According to a special Steel Founders' Society of America survey, the reporting foundries expect last-half shipments to increase an average of 18% over the first half of the year. The survey also indicated that the foundries are looking for the last-half increases to brighten the entire 1961 picture. An average increase of 13% was forecast for 1961 compared with 1960.

Among the respondents were a number of railroad suppliers.

American Steel Foundries' President Joseph B. Lanterman said: "Orders for new freight cars will steadily improve from present levels. This should result as generally improving economic conditions and a subsequent upturn in rail shipments put pressure on railroads to increase the size of their freight car fleet. The continuing rate of freight car retirements should also contribute to this need for additional cars."

The Buckeye Steel Castings Co., Columbus, Ohio, reports that the needs of the railroads have accumulated and improvement in general economic conditions indicates increased carloadings in the fourth quarter of 1961.

The Falk Corp., Milwaukee, Wisc., expects a 7% increase in shipments in the last half of 1961, which would give Falk a year 2% better than 1960. The company expects that it will make increased last-half shipments to the railroad market.

Superior Steel & Malleable Castings Co., Benton Harbor, Mich., expects a 32% increase in last-half shipments, which would enable the company to equal the 1960 shipment volume. The company feels that increased shipments will come in the railroad field, among others.

Symington Wayne Corp., Symington Division, Depew, N.Y., on the other hand, expects a decrease of 20% in shipments in the last half and thinks 1961 total shipments will be off 35% from the 1960 volume.

Letters From Readers (*Continued from page 10*)

road or railroads—when the ICC has indicated that it believes such merger will be in the public interest."

Do Non-Ops Favor Pay Raise?

Southeast

To the Editor:

I have just carefully read the article "What Target for Non-Ops" on the "Action Page" of your Sept. 18 issue. I noted that you would welcome letters from unionists as to whether or not they agree with your opinion. I wish to state that, as a unionist of some 50 years, I agree with this article 100%.

It may surprise you to know from a unionist on the inside who knows—that I know it to be a fact that 90% of our craft—the boys that earn and remit heavy dues to sustain a handful of top union brass—fully agree with it—are perfectly satisfied with their present wage scale.

They do not want and would not consider asking for more pay for very simple reason: They all know they are mostly making much above the average of employees in other lines of work. This writer personally has always felt that, if he were not satisfied, he could very easily enter some other occupation.

I am almost positive that not 2% of the non-operating employees knew that this 25-cents-per-hour raise demand was in the making. I did not until I read the above-mentioned article in Railway Age—but, should we attempt to oppose it, we would have every kind of insult thrown at us by a few of our own union high brass and by some of the other union crafts—so we just have to go along with it—like it or not.

In conclusion I will now ask that you keep my name and craft confidential so I can continue to work.

Veteran Non-Op

Alternative to Mergers

Portland, Oregon

To the Editor:

It seems to me—aside from large-scale mergers—that much could be done by railroads in the way of joint operations, consolidation of facilities, and integration of operations. This approach might avoid opposition which large-scale proposals arouse.

My thought would be for each of the major companies to form a committee consisting of a high level representative of each department. This group would make a study of the property and work with similar groups from other companies to work out agreements for joint operations of branch lines, yards, stations, and all the areas where joint operation could result in substantial savings.

I am sure any responsible railroad officer knows of numerous instances of parallel operations where one track would adequately serve the public or two stations where one agent could handle both companies' business adequately, or where a train could operate over a branch of one company and return over a branch of another, possibly providing the shippers with more frequent and better service . . .

Hugh M. Robertson

NARUC WORKSHOPS

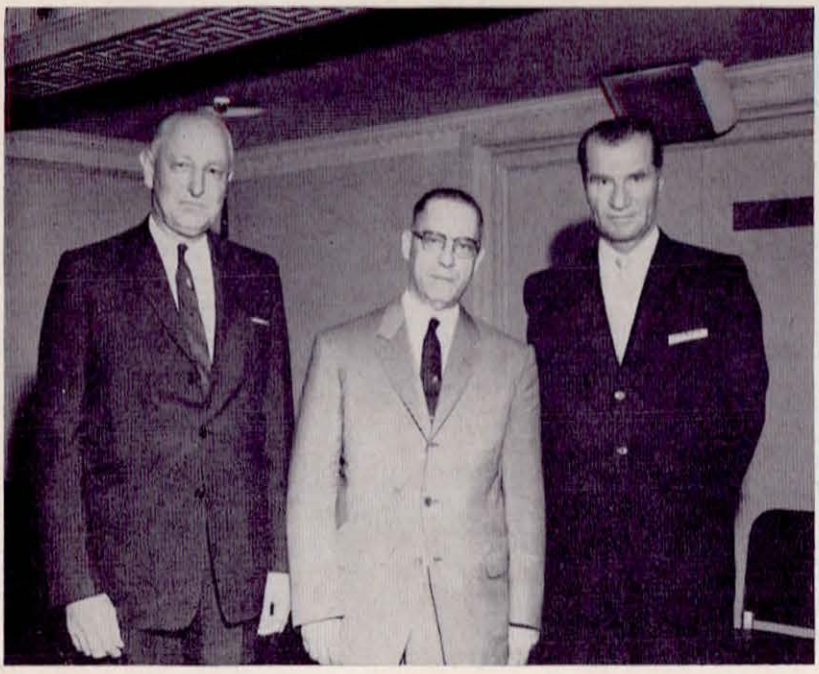
(*Continued from page 10*)

from the reduction in personnel and the attendant dislocation of thousands of employees, is that there is no master plan for consolidation of the nation's rail network.

"While many contend that today's merger proposals are based almost solely on economic benefit to the carriers involved, it is widely held that mergers, per se, are the real solution to the railroads' financial ills. In any event, the next few years will see a substantial change in the service and facilities of the railroads and the impact of those changes will be felt by all other transportation agencies."

The committee reported that it had seen no reversal of the deteriorating position of the railroads, which it reported on last year. "In fact," it added, "there appears to be a further deterioration.' The committee was headed by Clarence Noah, member of the North Carolina Utilities Commission.

Harriman Awards



GOLD MEDALS went to Union Pacific, Central of Georgia, and Duluth, Missabe & Iron Range. Left to right: W. E. Dillard, president and general manager, CofGa.; D. J. Smith, president, DM&IR; E. H. Bailey, vice president (operations), UP.

CERTIFICATES OF COMMENDATION were accepted by (left to right standing): W. J. O'Connor, vice president and general manager, Colorado & Wyoming; R. O. Bills, superintendent, Ogden Union Railway & Depot; W. H. Hudson, vice president (operations), St. Louis Southwestern; T. A. Jerrow, vice president (operations), Great Northern; H. P. Thinnes, general manager, New York, Chicago & St. Louis. Also (sitting): J. H. Morgan, vice president and superintendent, Philadelphia, Bethlehem & New England; S. T. Saunders, president, Norfolk & Western; W. A. Grotz, president, Western Maryland; R. E. Sease, president and general manager, New York, Susquehanna & Western; L. J. Waters, general superintendent, Georgia & Florida.

John W. Lovett
Rutland

Mallory J. Craig
TP&W

People in the News

ASSOCIATION OF AMERICAN RAILROADS.—**David A. Swit,** a member of the staff of the Atlanta, Ga., Bureau of the **Associated Press,** joined the news service of the AAR on Oct. 1.

ERIE-LACKAWANNA.—**Andrew M. Bimson,** executive assistant to the chairman of the board, New York, retired Sept. 30 after 35 years of service.

NATIONAL HARBOURS BOARD of CANADA.—**Howard Mann,** vice chairman, appointed chairman, succeeding **Brig. Maurice Archer,** who resigned to join an engineering firm in Montreal. **Louis Rene Talbot** succeeds Mr. Mann as vice chairman. Mr. Mann was general secretary of the Canadian Industrial Traffic League from 1947 to 1955; subsequently executive manager of the Maritimes Transportation Commission; and a member of the MacPherson Royal Commission on Transportation.

NEW JERSEY DIVISION OF RAILROAD TRANSPORTATION—JERSEY CENTRAL—PENNSYLVANIA.—Ford, Bacon & Davis, Inc., New York engineering and management consulting firm, has been retained to study the physical and economic feasibility of routing Jersey Central Lines commuter trains into the PRR station in Newark, N.J., to permit New York-bound commuters to reach Manhattan via the Hudson Tubes or PRR trains. At present, Jersey Central commuters use a ferry from the road's rail terminal in Jersey City to reach Manhattan. The ferry would be discontinued under the proposed change.

RUTLAND.—**John W. Lovett,** manager of personnel, Rutland, Vt., appointed general manager, with jurisdiction over the purchase and stores, transportation, maintenance of way, maintenance of equipment, and personnel departments.

SANTA FE.—**H. J. Briscoe** appointed terminal superintendent, Wellington, Kan., assigned to special duties and jurisdiction over western lines. Headquarters of the Colorado division moved from Pueblo, Colo. to La Junta, Colo., and the division extended to include first, second, third, Santa Fe and Rocky Mountain districts of the former New Mexico division. The Pecos division renamed the New Mexico division and will include the former Pecos division and the El Paso district (including Albuquerque Terminal), Magdalena, Deming, Santa Rita and Fierro districts of the former New Mexico division. The Panhandle division consolidated with the Plains division and **K. C. May,** superintendent, given jurisdiction over the combined division, with head-

quarters at Amarillo, Tex.

W. N. Sims appointed manager, data processing, Topeka, Kan. **C. E. Ahlstrom** named assistant manager, data processing.

SEABOARD.—**B. R. Moore** has been named assistant engineer, Georgia division, Atlanta, succeeding **W. E. Billingsley,** appointed assistant engineer, South Florida division, Tampa, Fla.

SOO LINE.—**R. E. Howard** appointed general agent, Duluth, Minn., succeeding **P. W. O'Brien,** retired. **J. C. Youngs** named general agent, Bismarck, N. D., to replace **J. D. Senn,** promoted.

SOUTHERN.—**Joe G. Moore,** superintendent of maintenance equipment, Charlotte, N.C., promoted to assistant vice president—mechanical, Washington, D.C. **O. Thomas Harmon, Jr.,** shop superintendent, Charlotte, succeeds Mr. Moore.

SOUTHERN PACIFIC.—**Jack E. Hebbron** named valuation officer, San Francisco, succeeding **Ethan J. G. Allen,** who retired Aug. 31. **Stephen Miller, Jr.** named assistant valuation engineer, San Francisco, to replace **Leo Gunderson,** appointed valuation engineer there.

D. K. McNear appointed superintendent, Shasta division, Dunsmuir, Calif., replacing **S. B. Burton,** on leave attending Massachusetts Institute of Technology. **D. R. Kirk** named superintendent, Tucson and Rio Grande divisions, Tucson, Ariz. and El Paso, Tex.

TEXAS - PACIFIC.—**Don C. Millender** appointed assistant to general manager-freight rates, Dallas, Tex.

TOLEDO, PEORIA & WESTERN.—**Mallory J. Craig,** general manager—traffic, Peoria, Ill., elected vice president—traffic.

WABASH.—**Charles F. Herberger** named industrial agent.

Supply Trade

William E. Gadd, formerly vice president of the **Rail Joint Co.,** has opened offices at 575 Main Street, Chatham, N.J., for the purpose of service as sales engineer and consultant in the railroad supply industry.

The Electric Storage Battery Co. and **Sun Oil Co.** have signed an agreement for the exchange of research information and for future cooperative development of fuel cells.

Peter J. Wolf, general sales manager of **Maintenance Equipment Co. of Chicago,** has been elected president of the **Association of Track & Structures Suppliers,** succeeding **Raymond T. Johnson, Jr.**

Evans Products Co., Plymouth, Mich., announced on Sept. 11 that it had received tenders of more than 90 per cent of the common stock and 80 per cent of the preferred stock of **Aberdeen Plywood & Veneers, Inc.,** Aberdeen, Wash., and the exchange has become effective. The exchange consummates the tender offer made by Evans to Aberdeen shareholders on Aug. 14.

OBITUARY

Maj. Gen. Frank A. Heileman, 70, Army chief of transportation from 1948 to 1953, died Sept. 24 at his home in Alexandria, Va.

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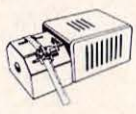
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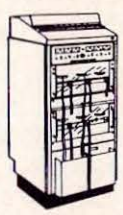
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You Ought To Know...

New ICC approach to regulatory interpretations is hoped for and expected by one of the Commission's new members — Commissioner Tucker. He says that Commission plans to delegate more matters to its staff should permit it to get away from the case-by-case approach and go in for more ex parte proceedings "to promulgate regulatory interpretations and guide lines in advance of actual cases or controversies." As Mr. Tucker notes, Chairman Magnuson of the Senate Commerce Committee has called for that approach and the commissioner believes the Commission is moving toward greater use of it.

Sante Fe, Western Pacific, Southern Pacific, Union Pacific and Northwestern Pacific have petitioned the California Public Utilities Commission for a five per cent increase in intrastate coach fares in California. The five roads claim losses totaling $15 million from their passenger operations in 1960.

If war should come, AAR Vice President Wayne Irwin warned the annual meeting of the American Association of Railroad Ticket Agents in Washington, "railroads literally could mean the difference between victory and defeat." He said that, in all the defense measures being taken for the country, the government has done nothing to insure the readiness of the railroads.

Legislation approving building of a 438-mile rail line into the Pine Point lead and zinc mining area of northwestern Canada has received its second reading—approval in principal — in Canada's Parliament. The bill includes authorization of approximately $86,500,000 to the Canadian National to acquire the land and build the railway. Construction is expected to be completed in 1966.

A new solid-state Univac computer has been delivered to the Maine Central to replace an earlier model in the road's accounting department.

"Railroads must make a new sales effort to the shippers of America," W. W. Kramer, traffic vice president of the Milwaukee, said in Chicago last week. Speaking at the RSMA freight sales seminar, Mr. Kramer said many traffic salesmen "are lacking in adequate information" to answer shippers' questions on-the-spot. One key to more effective selling, he said, is to get complete and useable information into the hands of the men making the sales calls.

Ten thousand MR-2 prestressed concrete ties have been ordered by the Ideal Cement Co. from American Concrete Crosstie Corp., Tampa, Fla., according to the latter company. The ties will be installed in a track connecting with the Atlantic Coast Line near Wilmington, N.C. Six thousand of them will be placed on 30-in centers under 85-lb rail, and 4,000 will be on 36-in. centers under 100-lb rail. Ideal Cement had previously purchased 250 MR-2 ties for installation at Tampa.

Crossing accident probe launched by the ICC last February has been broadened by the Commission to include all collisions between trains and trucks, regardless of the commodities being moved by the trucks. The inquiry had previously been limited to grade-crossing accidents involving trucks carrying petroleum products and similar dangerous liquids. The broadening order also severs the investigation, which is No. 33440, from the No. 3666 inquiry into transportation of explosives and other dangerous articles by private carriers.

Daniel P. Loomis, president of the AAR, will address the Oct. 5 luncheon of the silver anniversary meeting of the National Association of Shippers Advisory Boards, to be held at Buffalo, N.Y., Oct. 3-5. Program for the three-day meeting follows, generally, the format of prior years.

A strike against the Rutland was begun last week by the road's operating employees. Involved are union demands for a 15-cent-an-hour pay increase and restoration of all trains and crews furloughed since 1959, according to a Rutland spokesman.

TRANSPORT TRENDS

AIRLINES: American Airlines has filed a simplified freight tariff with the Civil Aeronautics Board that, if approved, will provide a single rate for a large list of commodities. The simplified freight tariff will go into effect Oct. 23 if CAB approval is forthcoming. Under the new tariff, almost any products will be carried at the same rate between two specific cities. Another airline, Flying Tiger, has also filed a rate innovation—in its case, a tariff based on commodity density. . . . Presidents of the country's 13 major air carriers, the five members of the CAB, and their assistants talked over the problems of the airlines at a closed meeting in Washington last week. On the agenda: financing, routes, fares, cargo, promotional activities, and competition.

WATERWAYS: Congress has passed and sent to the White House a bill legalizing dual schedules of freight rates for ocean carriers. The measure permits lower rates for shippers who agree to give the ship lines all, or a fixed percentage of their business. . . . St. Lawrence Seaway officials predict a 10-to-15% traffic gain will be chalked up this season over last.

HIGHWAYS: The Interstate Commerce Commission has prescribed rules to prohibit racial discrimination in interstate bus transportation. The rules generally prohibit motor carriers of passengers from operating buses in interstate commerce on which seating is based on race, color, creed or national origin. The regulations also prohibit interstate buses from using segregated terminal facilities.

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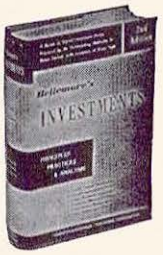

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'Full Costs,' Anti-RR Trap

There was a time, a few hundred years ago, when people believed the world was flat. If you ventured too near the edge you might fall off. It required decades of argument and demonstration to convince them otherwise.

Today we have counterparts of the flat-worlders of 1492. They are the transportation regulators and commerce lawyers who insist that "fully distributed costs" provide a reliable measure of the relative economy of two different types of transportation; and that such costs are a proper regulatory gage for competitive rates.

Some (maybe most) railroad men may believe that a question like this means nothing to them. If so, they are mistaken. Because today's flat-worlders with their "fully distributed costs" dogma are preparing to put the quietus on the railroad business. They are seeking to make their doctrine of "fully distributed costs" an article of faith, enforced by law. If they succeed, the result will be the destruction of the jobs of railroaders, the investments of railroad owners, and railroad service.

Here is how this hocus-pocus works, and how it affects the livelihood of everybody in and around the railroads: Suppose there is a good-size railroad that, last year, took in $150 million in freight revenue. Suppose further that this $150 million was earned by hauling 10 billion ton-miles of freight at an average charge of 1.5 cents per ton-mile; and that the $150 million was sufficient to pay all expenses of the railroad (including making up the deficit on passenger traffic) and permitting a 4% return on the total investment in the railroad.

Of this $150 million in total expense, assume that $50 million was constant (not varying with traffic volume) and that $100 million was directly variable with the amount of traffic handled. If traffic rose from 10 billion ton-miles to 15 billion, constant expense would remain the same ($50 million) and variable expense would rise from $100 million to $150 million. The variable expense per ton-mile would not change, but the constant expense of $50 million would be spread over more ton-miles. If a railroad like this could induce an increase of 50% in its freight business by reducing its rates somewhat, it would be ahead profit-wise, and its customers would benefit from lower charges.

But here the "fully distributed costs" dogmatists step in and say: "You must not reduce any of your rates below the amount necessary to keep your average at 1.5 cents per ton-mile."

If the railroad, to raise its ton-mileage from 10 to 15 billion, were to reduce its average charge per ton-mile to 1.4 cents, its gross revenue would rise from $150 million to $210 million. Its variable expense would rise from $100 million to $150 million, but its constant expense ($50 million) would remain unchanged. The railroad would thus be $10 million better off in its net income, while shippers would save $15 million.

It is just this kind of benefit—to railroads and their customers—from rising traffic volume at lower average charges that the "fully distributed costs" dogma is designed to circumvent.

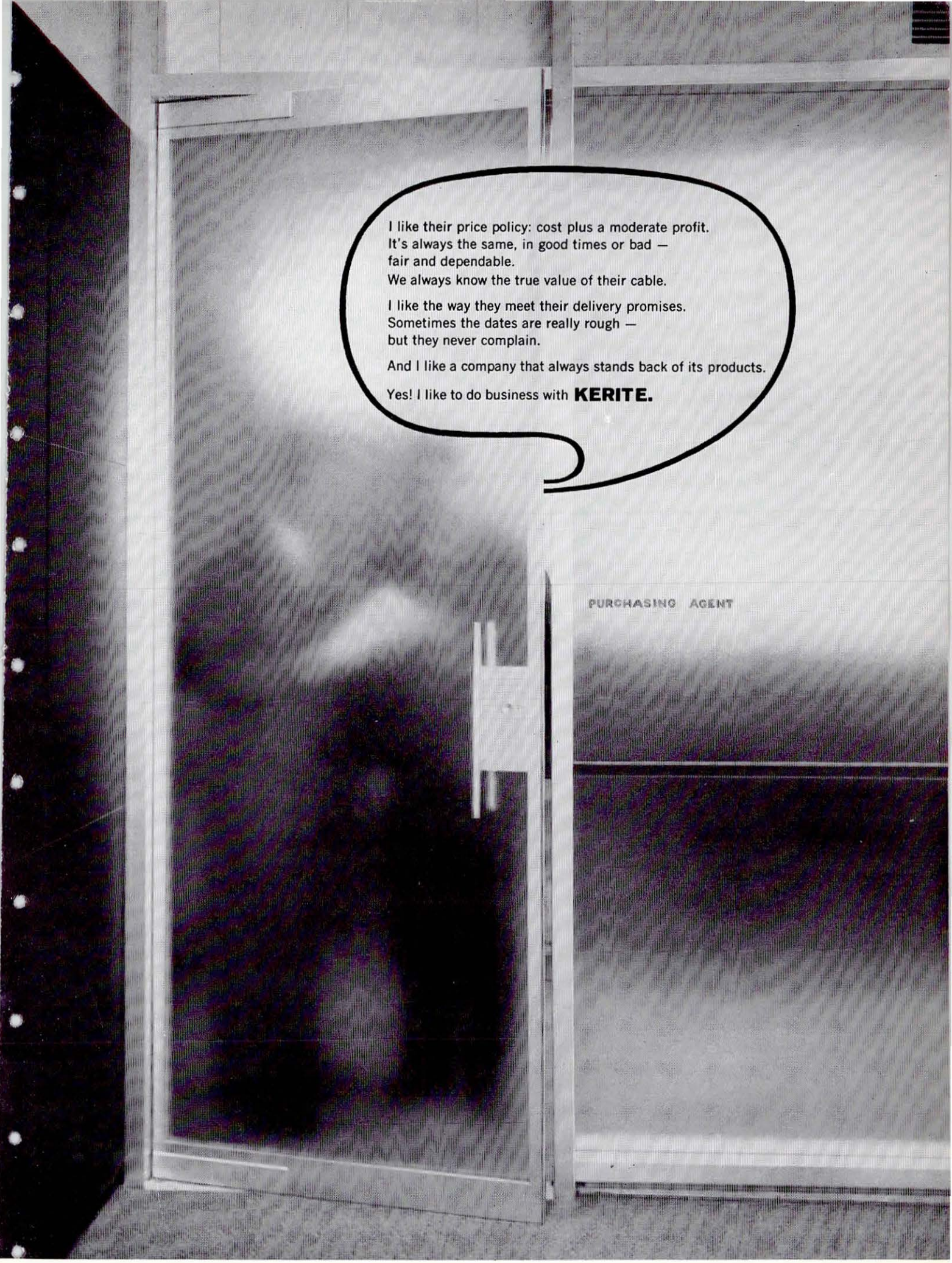
But this isn't half of the irreparable damage that acceptance of the "fully distributed costs" dogma would do to railroads. Suppose the railroad in the example should *lose* one billion of its present 10 billion ton-miles to unregulated waterway and highway carriers. The railroad's $50 million of constant expense would remain unchanged. Its variable expense would decline from $100 million to $90 million—total expense $140 million spread over 9 billion ton-miles, or 1.55 cents per ton-mile.

The "fully distributed costs" dogmatists would insist that railroad rates be increased to yield that 1.55 cents per ton-mile—which, of course, would cause traffic to decline still further. If the railroad's traffic were to fall from 10 billion to 5 billion ton-miles, total expense (constant and variable) would be $100 million. Spread over the reduced volume of traffic, the "fully distributed costs" would figure out at 2 cents per ton-mile. And the dogmatists would insist that railroad rates be again raised to attain that average. The more traffic is lost because of high rates, the higher the rates have to go as the constant costs are distributed over fewer ton-miles.

ASLEEP AT THE SWITCH?

This doctrine is obviously anti-economic. The way rates should be related to costs is that they should be not lower than variable costs (you must not incur an added expense of $1 to take in only 90¢ of added revenue). After variable costs are covered, rates should be as much above the variable costs as competition and commercial fairness will permit. Maybe the practicable ratio above variable costs in some cases will be only 5%. In others it may be 100% or 200%—but, in any event, the railroad is better off with the 5%, if that is the most it can get, than it will be if it loses the tonnage.

It does not require a college degree in economics or mathematics to explode the fallacy of the "fully distributed costs" dogma. The fact that this doctrine is being seriously advocated by some people in powerful places simply indicates their belief that railroad people are asleep at the switch. And that will be the only possible explanation, if railroaders let their opponents get away with their program.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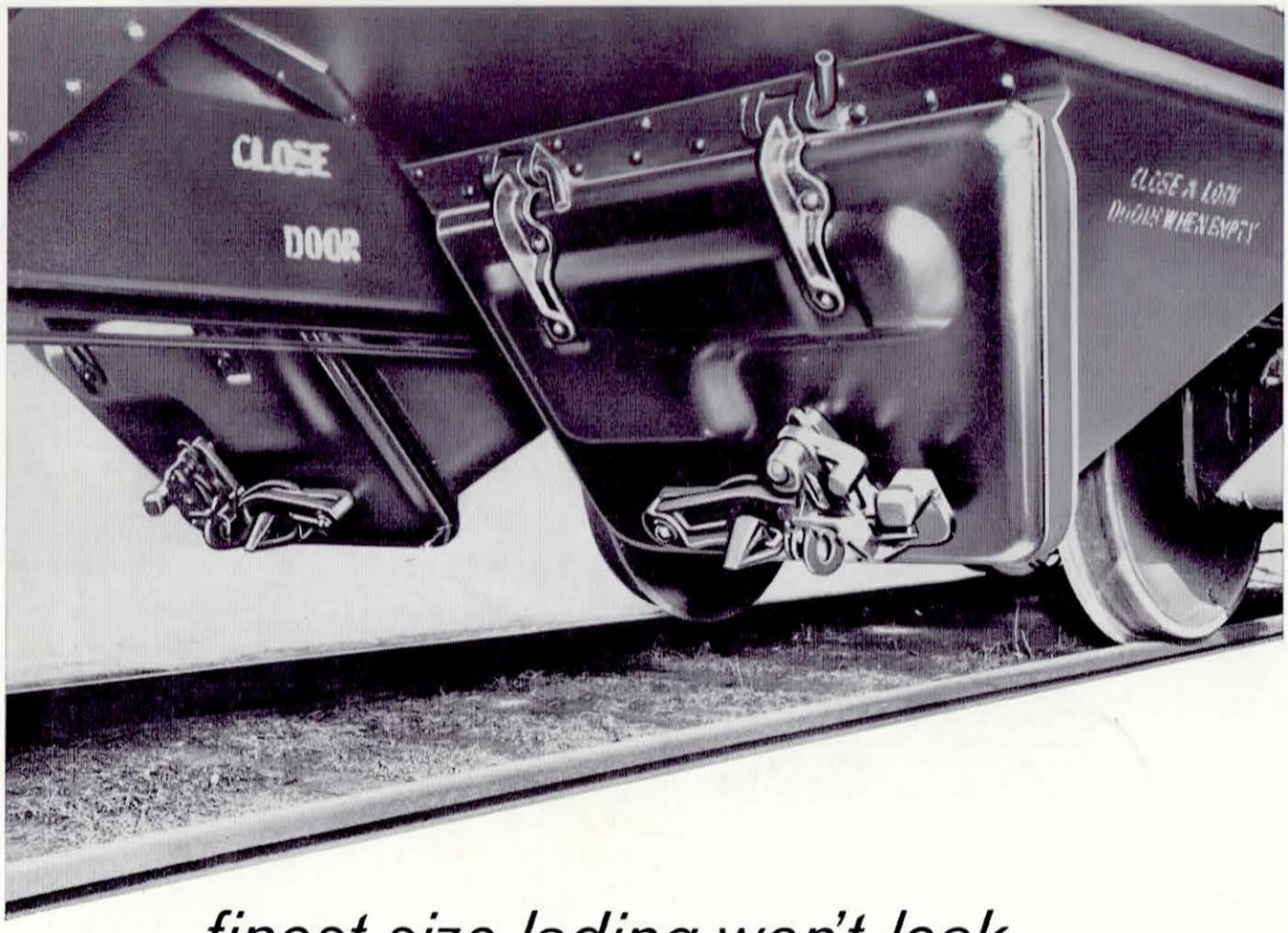

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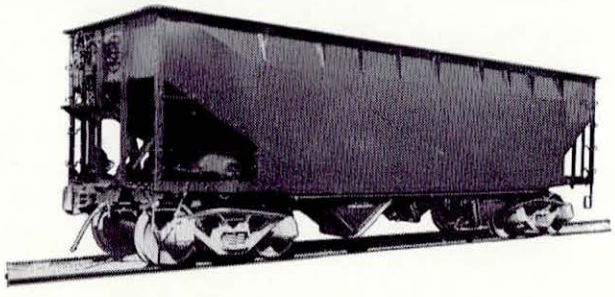

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